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THE PILOT TEST OF OFFICE AUTOMATION EQUIPMENT IN THE OFFICES OF UNITED STATES SENATORS

BY THE

COMMITTEE ON
RULES AND ADMINISTRATION
UNITED STATES SENATE

NOVEMBER 1983

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LETTER OF TRANSMITTAL

OCTOBER 19, 1983.

To: Senator Mathias.
From: John Childers and John Swearingen.

Office Automation Test: In December 1982 the Committee on Rules and Administration authorized a test of office automation equipment in twelve Senators' offices, using equipment to be leased from six vendors, at a cost not to exceed $2000.00 per month per office. The test demonstrated that staff of Senate offices could quickly learn to use office automation equipment and put it to productive use in the work of a Senate office. We consider the test a successful experiment which points to the need and usefulness of such equipment.

Recommendation: Office automation equipment should be provided to offices as a "usual and standard" item of supply either: (1) according to regulations governing the allocation of such equipment promulgated by the Committee on Rules and Administration, or (2) purchased directly by offices from an "approved list," with funds from a separate office account.

Cost: Placement of office automation equipment in all Senators' offices would cost between $10 million and $15 million, if purchased. Therefore, if office automation equipment could handle the work of CMS (and observations made during the test indicate that it eventually could) the cost would be offset in three years by savings on the CMS contract alone.

Other Computer Related Issues: Following the committees disposition of this matter, several other computer issues can be considered, such as larger computers for the Senate Computer Center and extension or replacement of CMS. Computers in Senators' offices can cause a substantial reduction in both of the foregoing and should, therefore, be resolved first. Computers for committees can be dealt with separately as already has been done for the Foreign Relations Committee and the Armed Services Committee and as we are recommending for the Rules Committee.

Action Items: 1. We recommend that this matter be placed on a business meeting agenda for approval of the issue of a request for proposal.

2. We recommend that draft copies of this report be issued to Rules Committee Members' representatives and to the Sergeant at Arms.

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*Participant in pilot test.

I. SUMMARY

In December 1982 the Committee on Rules and Administration authorized a test of office automation equipment in twelve Senators' offices, using equipment to be leased from six commercial vendors of computer equipment, at a cost not to exceed $2,000 per month per office. The purpose of the test was to determine if office automation equipment (by which is meant mini-computers with multiple workstations, stand-alone word processors, or stand-alone micro-computers, and such software as word processing and electronic spreadsheets) offered any benefits that would be useful in the environment of a Senate office. The resolution is included as Appendix A. The authorization followed a hearing held by the Committee on Rules and Administration on computers and communications on December 8, 1983. A summary of the hearings prepared by the Congressional Research Service is in Appendix K.

The test was not for the purpose of evaluating specific vendors. Vendors chosen in the test were informed that participation would not give them an advantage in a future procurement over vendors not participating.

The test demonstrated that staff of Senate offices, many of whom had no prior background in the use of computers, could quickly learn to use office automation equipment and could just as quickly put it to productive use in the work of a Senate office. The test further demonstrated that the staff could, as a general rule, quickly become fluent in the technological jargon and gain a useful working knowledge of the underlying concepts.

In the judgment of the Committee staff, office automation equipment can be useful in a Senate office as a means of improving: (1) the timeliness, appearance and substantive content of printed matter; (2) worker morale and job satisfaction, and (3) service to constitutents. In addition, office automation can make it possible to perform certain tasks, such as office expense budgeting and accounting, in a much more comprehensive manner to achieve results that cannot be achieved through manual methods.

Office automation equipment should be provided to offices as a "usual and standard" item of supply, much as telephones, typewriters, and photocopy machines are today. Such equipment should be either: (1) provided to offices by the Sergeant at Arms (Senate Computer Center) from a stock of equipment procured and maintained for that purpose, according to regulations governing the allocation of such equipment promulgated by the Committee on Rules and Administration; or (2) purchased directly by offices from an "approved list," with funds from a separate office account.

COST

At this time it appears that the placement of office automation equipment in all Senators' offices would cost between $10 million and $15 million, if purchased. By way of comparison, the contract with United Information Services for the Correspondence Management System (CMS) costs $4 million a year. The terminals used with CMS represent a one-time cost of $5 million. Therefore, if office automation equipment could handle the work of CMS (and observations made during the test indicate that it could) the cost, if purchased, would be offset in three years by savings on the CMS contract alone. Additionally, if such equipment is not provided to offices, the offices will place additional demands on the Senate's central computer facilities, with an increasingly adverse effect on those services that only the central computer can handle.

RECOMMENDATIONS

1. That the Committee on Rules and Administration issue a "request for proposal" to industry for office automation equipment for Senators' offices'; and
2. That the Committee defer decisions on the number of vendors from which equipment will be obtained and whether the equipment will be provided to offices from a central stock or purchased by offices from an "approved list" until responses are received from the request for proposal.

II. BACKGROUND

The past five years have witnessed a revolution in computer equipment. Prices have fallen, equipment size has shrunk, and processing power and ease of use have increased to a remarkable extent. Moreover, the reliability has increased to a point where it is feasible for vendors to deploy and support equipment in thousands of locations. Indeed, the processing power that once would have required as much floor space as that in the main hearing room of the Committee on Rules and Administration now fits into a small closet, and almost as much processing power can be packaged into a single, attractive, desk-top unit not much larger than a ten-inch portable television set.

A similar revolution has occurred in the area of computer programs. Software to automate office procedures has become readily available. Today one can simply go to a retail store and buy a small magnetic disk containing word processing, spreadsheet, or graphics software, much as one would buy music on a cassette tape to play on sound equipment at home. Even though there is great variation among programs, they are generally easy to learn and easy to use. As game computers have moved into homes, educational computers into elementary schools, business computers into every kind and size of business, the microcomputer promises to become an integral part of everyday life. Seen in this light, and as more and more people come to work for the Senate with prior work experience where the office computer was taken for granted, the questions for the Senate become not "whether" or "what" but "which ones," "how many," and "how best to proceed."

It was against this background of the proliferation of small and medium sized computers that the Senate office automation pilot test was initiated.

III. THE PILOT TEST

A. STRUCTURE OF THE TEST

1. On December 15, 1982, the Committee on Rules and Administration authorized a pilot test of office automation equipment to be conducted in twelve Senator's offices, using equipment to be leased from not more than six vendors at a cost not to exceed $2000.00 per month per office. At the end of nine months a report on the findings from the test was to be submitted to the Committee on Rules and Administration. This is that report.

2. The following offices and vendors participated in the test.

SENATOR	VENDOR
Armstrong	Sperry
Baucus	Sperry
Bradley	Digital Equipment Corp. (DEC)
D'Amato	IBM
DeConcini	Xerox
Dole	Honeywell Information Systems
Huddleston	Wang
Kennedy	Honeywell Information Systems
Mattingly	Xerox
McClure	Digital Equipment Corp. (DEC)
Stevens	IBM
Warner	Wang

In addition to the above listed offices, the Digital Equipment Corporation furnished to Senator Humphrey, free of charge, a minicomputer with multiple work-stations. The lease value of the equipment furnished to Senator Humphrey is more than twice that of the $2000.00 per month per office. During the course of the test some of the vendors provided more equipment than their $2000.00 allowance would cover. Therefore, no comparisons of vendors should be made.

Criteria for selection of participating offices included prior expression of interest in office automation and evidence that the test would have the backing and support of the Senator and Administrative Assistant. Prior experience with office automation was not a factor.

3. Prior to the installation of equipment, Administrative Assistants were asked to rank potential applications by anticipated order of importance. The ranking sheets are included as Appendix B. Word processing was included on all ranking sheets as the most important application. The test confirmed this as being more important relative to other applications than had been previously thought. Second and third order choices varied, with scheduling and electronic spreadsheets being highly desired. Implicit in the test was the need to distinguish those applications that would be

useful to all offices in their day-to-day work from those that would fall into disuse after their "fad factor" wore off or which would be used only by offices with an unusually "gadget-prone" staff.

It was understood from the outset that the amount of equipment to be installed for the pilot test was not enough to handle the work of the Correspondence Management System. From observations made during the pilot test, however, it is apparent that these systems could be used to update mailing lists and to create the text of letters which could be transferred to the Senate's central computer for printing on the high-speed page printers.

The agreements for the lease of the equipment consisted of two documents for each office. First was an agreement between the Senator and the vendor setting forth activities to be supported, the equipment to be provided, the persons to be trained, and the timeliness of response by the vendor to service calls. The second document, in which the first was incorporated by reference, was a contract between the Senate and the vendor defining equipment and services to be delivered, price, and terms and conditions. These are included in Appendix C. It should be noted that the contract provides for no price increases on the test equipment for two years. This reflects the realization that at the completion of the test, offices would probably have established a dependence on the test equipment and would be adversely affected by its removal. It is anticipated that the equipment currently in test offices would remain there until the office chooses to have it removed or replaced by whatever system is selected for Senate-wide use.

4. Each office was visited, usually weekly, by a liaison team consisting of one person from the Senate Computer Center, Educational Services and Support Division, and one person from the Technical Services Staff of the Committee on Rules and Administration. The visits continued until use of the equipment by the offices leveled off and few, if any, new observations were made at each visit. The visits were for two purposes: first, to give offices an opportunity to share any grievances or joy they had about the test, and second, and more importantly, simply to observe the office reaction to the introduction of office automation. With respect to the hardware and software placed by the vendors, the liaison teams generally played a role of neutral observer, refraining from offering advice, suggestions or technical information, so as not to blur the focus of the test on how the offices themselves would learn the techniques and apply them to the real work of the office. Extensive assistance was rendered with respect to use of the Senate communications network and to accessing programs on the Senate computer system. Descriptions of the pilot test in each office are included as Appendix D.

B. OBSERVATIONS

1. Word Processing.—Without exception, offices quickly learned word processing and were able to quickly bring it to bear on ad-hoc letters, speeches, press releases, and floor statements. In some offices, the equipment was used exclusively by the clerical staff. In others, some was assigned to professional staff, who became adept and adopted it for heavy, daily use. Their experience reflects that of others outside the Senate, such as professional writers, who find a major benefit of such equipment to be in the enhancement of their creative powers at the time of initial document composition. In only a few instances was the equipment tried by the professional staff and rejected.

2. Electronic spread sheets.—While electronic spreadsheets (of which VisiCalc was the first and probably most well known) may eventually prove useful to offices, the test results are inconclusive at this point. This is attributable to at least two factors: first, their greater complexity and subtlety in comparison with word processing applications, and, second, the comparatively far greater need of most staff to simply turn out textual material, as opposed to engaging in complex numerical analysis. It could be predicted that only a small proportion of staff in any office will see enough relevance of electronic spread sheets to their work to invest the time to gain proficiency.

3. Scheduling.—A few of the pilot offices have used their systems for rescheduling. One, Senator Kennedy's, uses the schedule feature extensively and judges it to be the most useful feature of the system. They print monthly and weekly schedules on letter size paper and daily schedules on 3 by 5 cards. As the schedule changes, they are able to update the file and produce more sheets and cards faster than when they were prepared by hand. Only events for which commitments have been made are entered in the system, which was modified by the vendor to accept the entry of multiple events in the same time period.

In the interviews with Administrative Assistants, some interest was expressed in only recording their Senator's schedule after the fact. Examination and analysis of the events attended, locations visited, groups met with, and so forth would facilitate better informed judgments about which opportunities should be accepted in the future. For example, records coded by locality and group could be sorted (listed by groups) on such terms thus revealing the extent of contact (or lack of contact) with different parts of the State and of the constituency. Such an application would seem to be of significant benefit to all offices, and, significantly, is immediately available from most vendors.

In interviews there was also discussion of a computer facility to plan a Senator's advance schedule, sophisticated enough to accomodate entry of all possible opportunities (such as all invitations received, sporting events, fairs, conventions, and graduations and including information on the travel time from place to place). Such a system could be written, perhaps using existing scheduling systems as a start, but the difficulties inherent in such a program should not be underestimated.

4. Communications.—Some offices recognized at the outset that communications among terminals within the office and among the Washington office and the State officies was highly desirable. The pilot test supports this view. Other offices, which were provided with stand-alone micro-computers and some mini-computer systems where communications were not yet available, eventually found the lack of communications features frustrating. Such a capability should be included in any future system configuration for offices and should support: centralized staff calendar management, office message switching, transfer of documents in process from one worker to another, input to the Correspondence Management System, and transmission of press releases, speeches, and other material between the Washington and State offices.

5. *Justification.*—Literature on this subject indicates that a person whose full-time job is to type textual material can achieve an overall productivity increase of about 20% when upgraded to office automation equipment from some less advanaced magnetic media such as a System/6, a Memory Typewriter, or a Mag-Card Selectric Typewriter. If the upgrade is from a manual method, such as an electric typewriter, the gain is more. A professional who spends a major portion of his or her time writing can achieve productivity increases of about 10%. In addition, persons who are not direct users can have their own productivity increased through its use by persons who support them. This occurs because reviewers of a document no longer have to re-read a revised document in its entirety, and because the shorter turnaround time between drafts can mean that reviewers need less time to reorient themselves to the subject. Such productivity gains are estimated at about 5%. See Appendix E, notes of a conversation with Dave Franklin, Director of Administrative Services at the IBM Manufacturing Plant in Austin, Texas, Appendix F, "Justifying Office Automation," by William J. Boczany, and Appendix G.

Productivity increases estimated by the Rules Committee staff for some of the text offices are set forth in the following table. See Appendix G for detail.

These productivity improvements could be factored by the user's salary and certain overhead costs to arrive at a dollar value of the improvement. This value could become a budget figure for the cost of the equipment.

Office	Productivity increase, percent	Thousands of dollars		
		Salary range	Justification [1]	Equipment cost [1]
Humphrey:				
Direct users, 16	5–25	12–67	117	54
McClure:				
Direct users, 5	10–25	15–35	104	
Indirect users, 1	5	50	11	
Total			135	24
Bradley:				
Direct users, 5	5–20	15–36	43	
Indirect users, 2	5	21–30	11	
Total			54	24
DeConcini:				
Direct users, 5	10–20	16–43	81	
Indirect users, 2	5	30–35	14	
Total			95	24
Mattingly:				
Direct users, 5	5–10	21–35	68	24

Office	Productivity increase, percent	Thousands of dollars		
		Salary range	Justification [1]	Equipment cost [1]
D'Amato:				
Direct users, 4	10–25	16–27	75	
Indirect users, 2	5	43–50	20	
Total			95	24
Kennedy:				
Direct users, 4	10–15	10–25	47	
Indirect users, 2	5	35–43	17	
Total			64	24
Stevens:				
Direct users, 4	15–20	16–17	47	
Indirect users, 2	5	30–50	18	
Total			65	24
Dole:				
Direct users, 4	5–20	16–35	47	24

[1] Note that the justification, or expected productivity improvement, exceeds the cost of the equipment needed to achieve the improvement. On the average, benefits exceed costs by three times.

6. Senate Computer Center recommendations.—Recommendations of the Senate Computer Center are included in Appendix H.

C. COMMENTS FROM SENATORS

On July 22, 1983, Senator Charles McMathias, Jr., Chairman of the Committee on Rules and Administration, sent a letter to all Senators requesting their comments regarding office automation. Senators participating in the pilot test were requested to give their views based on their experiences in the test. All Senators responding expressed support for the installation of office automation equipment in Senators' offices. Many also expressed the view that the Senators should be able to choose from among a limited variety of vendors and equipment. Some favored creating a new category of expenditure in the office expense allowance that could be used only for the acquisition of equipment from the approved list. Others favored having the equipment furnished by the Sergeant at Arms, which is the current practice with other comparable equipment. The letters are in Appendix I.

IV. CONCLUSIONS AND RECOMMENDATIONS

The Committee on Rules and Administration has always approached new technology with the view that it is not an end itself; technology has to do something for the Senate. There is a danger that a demand for new equipment can be the result of a cultural fascination with gadgetry. Claims for increased productivity can be exaggerated. The question can be raised of what value there is in spending additional millions of dollars on labor saving devices if the present staff is already able to complete assignments by the time they are needed. Therefore, in installation planning, productivity goals should be established for each workstation to be installed.

Since it is unlikely that staff will be reduced or that the benefits will be passed on to staff by reducing the hours in a work week with no reduction in salary, justifications based on the concepts of quality improvement (fewer errors, neater appearance), cost avoidance (performance of additional work without hiring additional staff), and enhanced worker job satisfaction will be necessary considerations. In the final analysis the actual users and office managers are the best judges of how much improvement has been achieved.

We conclude that office automation equipment can be useful in increasing the efficiency of Senators' offices and that the Senate should consider such equipment as standard office equipment, and we recommend that the Committee on Rules and Administration issue a "request for proposal" to the industry. Staff of Senators should be invited to participate in the review and evaluation of responses to the request for proposal. The final selection and recommendation of the evaluation panel should be presented to the Committee on Rules and Administration for final approval at the earliest possible date. There would be no contractual or financial commitment by the Senate until after that point.

The need to benefit from the rapid improvements that take place in office automation technology and to respond to diverse needs argues for obtaining equipment from more than one vendor. However, in the interests of: (1) providing effective training, service, and support, (2) transferring staff skills from office to office, (3) realizing financial savings through large procurements, and (4) preventing the accumulation of one-of-a-kind discards, the number of vendors should be severely limited. See Appendix J, "Personal Computers in the Corporate Environment." Decisions on the number of vendors from which procurements would be made, the method of funding, and whether to purchase or lease should be deferred until the responses from the request for proposal are received.

If equipment is assigned to offices from a central stock, it should be assigned on the basis of written requests from Senators after surveys have established the need for specific pieces of equipment and estimates of the productivity gains which may be realized. In the assignment and reassignment of equipment, justifications based on an expected productivity improvement to be realized at each work station should be required. If, on the other hand, equipment is to be purchased by offices from an "approved list," Senators would want to conduct such analyses for their own benefit. The Committee should provide offices with guidelines for such analyses.

We anticipate that office automation equipment will displace the current Correspondence Management System (CMS) for most offices, and we recommend that such a requirement be stated in the request for proposal for office automation equipment. Nevertheless, we recognize that the letter production needs of offices serving very large States might not be served by an office automation approach and that an additional, separate system dedicated to high-volume letter production might still be necessary for them. We, therefore, recommend that a second request for proposal be issued for a high-volume letter production system in time to replace the current CMS when the contract expires on September 30, 1985.

Offices that have participated in the pilot test should be allowed to retain the equipment they have used during the test until a replacement system is available.

APPENDIX A

RULES COMMITTEE RESOLUTION
AUTHORIZING THE PILOT TEST

APPENDIX A

RESOLVED, THAT THE STAFF IS DIRECTED TO PREPARE, FOR PRESENTATION TO THE COMMITTEE IN JANUARY, A PLAN FOR PILOT TESTING MULTI-PURPOSE OFFICE AUTOMATION SYSTEMS, FROM UP TO SIX VENDORS, IN UP TO TWELVE SENATORS' OFFICES, AT A COST NOT TO EXCEED $2000 PER OFFICE PER MONTH, WITH THE RESULTS TO BE EVALUATED IN NINE MONTHS FROM THE BEGINNING OF THE TEST. THE PLAN WILL IDENTIFY THE OFFICES IN WHICH EACH VENDOR'S EQUIPMENT IS TO BE INSTALLED, THE FUNCTIONS TO BE PERFORMED, HOW TRAINING AND SUPPORT ARE TO BE PROVIDED, THE NATURE OF PARTICIPATION BY THE SERGEANT AT ARMS, AND THE EVALUATION PROCEDURE; AND WILL BE ACCOMPANIED BY WRITTEN AGREEMENTS BETWEEN THE PARTICIPATING OFFICES AND VENDORS.

APPROVED DECEMBER 9, 1982

APPENDIX B

PILOT TEST OFFICE
APPLICATION RANKINGS

Appendix B

OFFICE: **Senator William Armstrong**

Functions — Designated users

1. Ad-hoc letters
2. Floor statements
3. Press releases
4. Report and memos
5. Voucher preparation
6. Office expense budgeting and tracking (Not accounting)
7. Office expense accounting
8. Preparation of Senator's annual financial disclosure report
9. Personnel histories
10. Scheduling
    a. Official Senate schedule
    b. Washington/Home State schedule
    c. Personal and family schedule
11. Washington/Home State (Intra-Senator) Communications
12. Communicate with retrieval systems, mail file, and index systems

SEE ATTACHMENTS

Attachment to Armstrong Function Selection Sheet

Limited Version

#1

Personal secretary
AA's secretary
2 legislative secretaries

#2

Same as above

#3
Senator
Press assistant

#4

Senator
AA
Personal Secretary
AA's secretary
2 legislative secretaries
Executive Assistant

#5

AA's secretary

#6

AA's secretary

#7

AA's secretary

#8

Senator

#9

AA's secretary

#10
Senator (a,b,c)
Personal secretary (a,b,c)

#11

AA's secretary
Personal secretary
State director (colo.)

#12

Senator
Personal Secretary
AA's secy
2 legislative secretaries
Mail room supervisor

Full Version

Attachment to Armstrong Function Selection Sheet

#1

Senator's personal secretary
AA's secretary
2 legislative secretaries
6 legislative assistants
1 legislative director
Administrative assistant
Executive assistant

#2

Same as above plus:
Senator

#3

Senator
Press Secretary
Press Assistant

#4

Senator
AA
Executive Assistant
Legislative director
6 legislative assistants
Senator's personal secretary
AA's secretary
2 legislative secretaries

#5

AA's secretary (serves as office manager- in charge of accounts)

#6

AA
AA's secretary

#7

AA
AA's secretary

#8

Senator

#9

AA
AA's secretary

Attachment to Armstrong Function Selection Sheet

#10

(a)

Senator
AA
Personal secretary
AA's secretary
2 legislative secretaries
press assistant

(b)

Senator
AA
Personal Secretary
AA's secretary
State director (Colo.)
(c)

Senator
Personal secretary

#11

Senator
AA
Personal Secretary
AA's Secretary
Legislative Director
2 legislative secretaries
Press Assistant
State director (Colo.)

#12

Senator
Personal Secretary
AA
AA's secretary
Legislative director
Executive Assistant
2 legislative secretaries
6 legislative assistants
Mail room supervisor
Press Assistant

OFFICE: Senator Max Baucus

	Functions	Baucus Office Priorities	Designated users
A	1. Ad-hoc letters	4	Marie, Marge & Steph*
	2. Floor statements	5	John, Marie, Marge & Steph
	3. Press releases	3	John & Nancy
	4. Report and memos	2	Marge & Steph
C	5. Voucher preparation	10	Judy
	6. Office expense budgeting and tracking (Not accounting)	9	Judy & Dan
	7. Office expense accounting	8	Judy & Dan
	8. Preparation of Senator's annual financial disclosure report	12	Judy
	9. Personnel histories	11	Judy
B	10. Scheduling	6	
	a. Official Senate schedule		Maureen, Dan & Ken
	b. Washington/Home State schedule		Maureen, Sharon, Dan
	c. Personal and family schedule		Maureen & Sharon
	11. Washington/Home State (Intra-Senator) Communications	7	Dan
A	12. Communicate with retrieval systems, mail file, and index systems	1	Marge, Steph, Marie, Jose

* If this includes a good word processing program with terminals on every desk, the users could include all legislative staff as well as clerical staff.

OFFICE: Senator Bill Bradley

Functions	Designated users
1. Ad-hoc letters	A, B, C, D
2. Floor statements	E,H D
3. Press releases	E.F.
4. Report and memos	A, D G H
5. Voucher preparation	
6. Office expense budgeting and tracking (Not accounting)	A
7. Office expense accounting	
8. Preparation of Senator's annual financial disclosure report	
9. Personnel histories	A
10. Scheduling	
a. Official Senate schedule	B.C.
b. Washington/Home State schedule	B,C,
c. Personal and family schedule	B,C,
11. Washington/Home State (Intra-Senator) Communications	
12. Communicate with retrieval systems, mail file, and index systems	A,G

Designated Users

A.	Rich Yurko	Ad Hoc, Statements
B.	Mary Stark	Scheduling
C.	Laura Wilcox	Scheduling
D.	Diane Ellison	Ad Hoc
E.	Richard Lerner	Press
F.	Leslie Devlin	Press
G.	Velda Turner	Speeches
H.	Legislative Department	Floor Statements, speeches

OFFICE: Senator Alfonse M. D'Amato

Functions	Designated users
1. Ad-hoc letters	Patricia Tierney, Legislative Secretary Shirley Underwood, Administrative Secreta
2. Floor statements	Patricia Tierney
3. Press releases	
4. Report and memos	Shirley Underwood & Patrician Tier
5. Voucher preparation	
6. Office expense budgeting and tracking (Not accounting)	
7. Office expense accounting	
8. Preparation of Senator's annual financial disclosure report	
9. Personnel histories	
0. Scheduling	
a. Official Senate schedule	Tamara Hallisey, Donna Kaufman
b. Washington/Home State schedule	Tamara Hallisey, Donna Kaufman
c. Personal and family schedule	Tamara Hallisey, Donna Kaufman
11. Washington/Home State (Intra-Senator) Communications	
12. Communicate with retrieval systems, mail file, and index systems	

OFFICE: DeConcini

Functions	Designated users
1. Ad-hoc letters	Sharon Gregoire, Kathy Fortune, J. White
2. Floor statements	Sharon G., Kathy F., Romano Romani
3. Press releases and index thereto	Julia Parker, Lynn Levine, Bob Maynes
4. Report and memos	Sharon Gregoire, Kathy Fortune
5. Voucher preparation	Steve Miller
6. Office expense budgeting and tracking (and salary) (Not accounting)	Steve Miller
7. Office expense accounting	Steve Miller
8. Preparation of Senator's annual financial disclosure report	
9. Personnel histories, leave records	Steve Miller
10. Scheduling	
a. Official Senate schedule	Jeanne McNaughton
b. Washington/Home State schedule	Jeanne McNaughton, Ron Ober
c. Personal and family schedule	Sally States
11. Washington/Home State (Intra-Senator) Communications	Sharon G., Kathy F., Sally States
12. Communicate with retrieval systems, mail file, and index systems	Steve Miller, Pat Yeager, 2nd CMS Spec.
13. Sponsored Bill/Key Vote Index System	Sharon G., Kathy F., Pat Y., 2nd CMS

The most important ones to our office would be: full-screen word processing in conjunction with functions 1 through 4; and functions 5, 6, 7, and 9.

Rec'd
1.18.83

OFFICE: SENATOR BOB DOLE

Functions	Designated users
1. Ad-hoc letters	1, 2, 6 & 11
2. Floor statements	1, 2, 3, 6, 7 & 8
3. Press releases	7, 8, 9 & 10
4. Report and memos	All staff
5. Voucher preparation	2, 3, 4 & 5
6. Office expense budgeting and tracking (Not accounting)	2 & 5
7. Office expense accounting	2, 3, 4 & 5
8. Preparation of Senator's annual financial disclosure report	2, 3, 4 & 5
9. Personnel histories	2 & 5
10. Scheduling	
a. Official Senate schedule	2, 3, 4 & 5
b. Washington/Home State schedule	3 & 4
c. Personal and family schedule	3, 4 & 5
11. Washington/Home State (Intra-Senator) Communications	1, 2, 3, 4, 5, 7, 9 & 10
12. Communicate with retrieval systems, mail file, and index systems	1, 2, 3, 4, 5, 8, 9 & 10

CODE TO NUMBERS:

1 - Ruth Ann Komarek (CMS)
2 - Beth Abrams (Secty to AA)
3 - Karleen Durrenberger (Asst. Pers. Secty.)
4 - Betty Meyer (Pers. Secty)
5 - Jo-Anne Coe (AA)
6 - Leah Knieff (Legis. Corresp./CMS)
7 - Beth Seto (Secty., Press section)
8 - Kay Luther (Legislative secretary)
9 - Walt Riker (Press Secty.)
10 - Scott Richardson (Asst. Press Secty.)
11 - All four legislative correspondents

8245-82L16-1200 12/17/82

OFFICE: Huddleston 1/13/78

	Functions	Designated users
priority	1. Ad-hoc letters	Mike Sandifer, Don Hellman, Claire Alagia Henry Semple, Pam Kueber
priority	2. Floor statements + Speeches	GARY Annise & Lynn McReynolds
priority	3. Press releases	GARY Annise & Lynn McReynolds
priority	4. Report and memos	same as 1
marginal	5. Voucher preparation	Pam Kueber
secondary	6. Office expense budgeting and tracking (Not accounting)	Pam Gell
secondary	7. Office expense accounting	Pam Gell
No use	8. Preparation of Senator's annual financial disclosure report	——
priority	9. Personnel histories	Pam Gell
	10. Scheduling	
priority	integrated a. Official Senate schedule	not decided
priority	b. Washington/Home State schedule	
priority	c. Personal and family schedule	
priority	11. Washington/Home State (Intra-Senator) Communications	Pat Price (Louisville)
priority	12. Communicate with retrieval systems, mail file, and index systems	Kathy Haire

)

OFFICE: Senator Humphrey

Functions	Designated users
1. Ad-hoc letters	Paul*, Tom, Marty, Norm, Don, Greg
2. Floor statements	Henry*, Dave, Ron, Anne, Nancy, Emily, Vacancy, Jan
3. Press releases	Rich*, Meredith
4. Report and memos	LA's & SA's, Jan
5. Voucher preparation	Laura
6. Office expense budgeting and tracking (Not accounting)	Paul
7. Office expense accounting	Paul
8. Preparation of Senator's annual financial disclosure report	Dave
9. Personnel histories	Laura, Paul
10. Scheduling	
a. Official Senate schedule	Laura
b. Washington/Home State schedule	Karyn
c. Personal and family schedule	Laura
11. Washington/Home State (Intra-Senator) Communications	[1 printer-Concord/terminal]
12. Communicate with retrieval systems, mail file, and index systems	Lucille*, Jim, Mike

* Supervisor

# of printers	# of terminals
4	22

JANUARY 3, 1983

OFFICE: Senator Edward M. Kennedy

Functions	Designated users*
1. Ad-hoc letters	1,2,3,4,5, & 6
2. Floor statements	2 & 3
3. Press releases	5
4. Report and memos	1,2,3,4,5, & 6
5. Voucher preparation	3
6. Office expense budgeting and tracking (Not accounting)	3 & 6
7. Office expense accounting	3 & 6
8. Preparation of Senator's annual financial disclosure report	----
9. Personnel histories	6
0. Scheduling	
a. Official Senate schedule	2 & 3
b. Washington/Home State schedule	2 & 3
c. Personal and family schedule	2 & 3
11. Washington/Home State (Intra-Senator) Communications	1,2,3,4,5, & 6
12. Communicate with retrieval systems, mail file, and index systems	1,2,3,4,5, & 6

*Designated users for Senator Kennedy will include:

1. Barbara Cobb, Assist. to Legis. Dir.
2. Chris Doherty, Appt. Sec.
3. Terry Hitchins, Assist. Appt. Sec.
4. Connie Lambert, Exec. Sec.
5. Sandra Walker, Assist. to Press Sec.
6. Bruce Morgan, Office Manager

8245-82L16-1200 12/17/82

OFFICE: MATTINGLY

Functions	Designated users
1. Ad-hoc letters	PB, NH, RM, PI, BF, HR, RW
2. Floor statements	PB, NH, RM, RA, PI, BF, HR
3. Press releases	PB, NH, RM, RA
4. Report and memos	PB, NH, RM, RA, PI, BF, HR, RW
5. Voucher preparation	Joy Lopez
6. Office expense budgeting and tracking (Not accounting)	Joy Lopez
7. Office expense accounting	Joy Lopez
8. Preparation of Senator's annual financial disclosure report	RA
9. Personnel histories	Joy Lopez
10. Scheduling	
a. Official Senate schedule	Charlotte Miller
b. Washington/Home State schedule	Lynn Henkel
c. Personal and family schedule	Charlotte Miller
11. Washington/Home State (Intra-Senator) Communications	PB, Leslie Miro (Atlanta)
12. Communicate with retrieval systems, mail file, and index systems	RW, Sarah Love, Helen Wallace

PB--Paul Brown
NH--Norma Haisten
RM--Richard Moore
RA--Robt Atchison
PI--Peggy Ingraham
BF--Beverley Franklin
HR--Hap Robers
RW--Roger Williams

OFFICE: Senator James A. McClure

Functions	Designated users
1. Ad-hoc letters	Susan Tackish, Lee Broadfoot
2. Floor statements	Mary Hansen
3. Press releases	Mary Hansen
4. Report and memos	Tod Neuenschwander
5. Voucher preparation	N/A
6. Office expense budgeting and tracking (Not accounting)	Tod Neuenschwander
7. Office expense accounting	N/A
8. Preparation of Senator's annual financial disclosure report	N/A
9. Personnel histories	Tod Neuenschwander
10. Scheduling	
a. Official Senate schedule	Margaret Lliteras
b. Washington/Home State schedule	Diana Hunsucker in Boise Office
c. Personal and family schedule	Margaret Lliteras
11. Washington/Home State (Intra-Senator) Communications	Susan Tackish, Claire Cummings/Diana Hunsucker in Boise
12. Communicate with retrieval systems, mail file, and index systems	Claire Cummings, Susan Tackish, Patty Welch, Lizzy Trucco

[illegible]

January 14, 1983

OFFICE: Senator John W. Warner

Functions		Designated users
1. Ad-hoc letters	(Gallo, Eichman, Nasser McChesney, Rogers)	5 persons
2. Floor statements	(Gallo, Eichman, McC)	3 persons
3. Press releases	(Eichman)	1 person
4. Report and memos	(Smith, Gallo, Nasser, McC)	4 persons
5. Voucher preparation	(Smith)	1 person
6. Office expense budgeting and tracking (Not accounting)	(Smith)	1 person
7. Office expense accounting	(Smith)	1 person
8. Preparation of Senator's annual financial disclosure report		
9. Personnel histories		
10. Scheduling		
a. Official Senate schedule	(Rogers, Nasser)	2 persons
b. Washington/Home State schedule	(Rogers, Nasser)	2 persons
c. Personal and family schedule		
11. Washington/Home State (Intra-Senator) Communications		
12. Communicate with retrieval systems, mail file, and index systems		

APPENDIX C

PILOT TEST OFFICE
CONTRACTS AND AGREEMENTS

United States Senate

CONTRACT

This contract is made and entered into this 9th day of March, 1983, between the United States Senate (the Senate), by the Committee on Rules and Administration of the Senate (the Committee), and Sperry Corporation (the Contractor).

It is hereby agreed that the Senate retains the Contractor to render the following specialized services, under the supervision of the Committee:

> A test of office automation in the office of Senator William Armstrong as set forth in the attached agreement between the Senator and the Contractor which agreement is incorporated in and is made part of this contract.

For the services to be provided under this agreement, the Contractor will be paid a sum not to exceed $ 2,000.00 per month for each month that such services are provided up to a total of 24 months, subject to the availability of appropriated funds. Such reimbursement to the Contractor shall be paid monthly from funds available in the appropriations for "Miscellaneous Items" in the contingent fund of the Senate upon vouchers approved by the Chairman of the Committee and upon receipt of statements from the Contractor with supporting data and a certification from the Senator that the services were received. The judgment of the Committee on Rules and Administration shall be final and conclusive with respect to the validity of claims for reimbursement of such expenses.

It is understood that the Senator may request the Committee to terminate this Agreement at any time. It is further understood that the Committee may terminate this agreement at any time with 30 days notice. In the case of termination, payment shall be based on the support provided up to the date of termination. If this Agreement is terminated without notice or with less than 30 days notice, payment shall include an amount equal to the rental cost of the equipment for 30 days minus the number of days between termination and the notice of termination.

The Senate accepts no liability for loss or damage to equipment until installed and operational.

Any disagreements between the Contractor and the Senator which cannot be resolved by negotiation shall be presented to the Committee for resolution. The decision of the Committee shall be final and conclusive.

The Contractor further agrees and warrants that it:

1. Has not employed (other than a full-time, bona fide employee working solely for the Contractor) to solicit or obtain this Agreement for any commission, percentage, brokerage or contingent fee;

2. Will save the Government harmless from liability in performance;

3. Will release no information obtained in carrying out the provisions of the contract without prior consent of the Committee;

4. Will not subcontract or assign elsewhere any of the work or service involved without prior consent of the contracting Committee; and

5. Will not discriminate in its performance of this Agreement because of race, color, religion, national origin, sex, age, or state of physical handicap, and shall comply with all laws appertaining to the compensation of labor.

6. Has no conflict of interest, direct or indirect, financial or otherwise, which would be applicable to the performance obligations covered by this agreement.

No Member or Delegate to Congress, or Resident Commissioner, shall be admitted to any share or part of this contract or to any benefit that may arise therefrom.

Contractor

Manager, Contracts & Pricing
Robert L. Patenaude

Committee on Rules
and Administration

Chairman
Charles Mc C. Mathias, Jr.

Wendell H. Ford

Ranking Minority Member
Wendell H. Ford

United States Senate

AGREEMENT

This agreement is entered into this 9th day of March, 19 83, between Senator William Armstrong __________, (the Senator), and Sperry Corporation, (Contractor)

I. GENERAL DESCRIPTION.

This is an agreement for a test of office automation in the Office of the Senator, intended to define the work under a contract between Contractor and the United States Senate. There shall be no liability on the part of the Senate or the Contractor until this agreement is incorporated in a contract between the Contractor and the Senate.

II. APPLICATIONS TO BE SUPPORTED.

Contractor agrees to supply office automation hardware, software, training, and maintenance in support of the activities in the Senator's office described in Attachment A.

III. TRAINING.

Contractor agrees to train staff members or their replacements employed by the Senator to the extent necessary for the use of office automation for the applications designated in Part II. The Senator agrees that the designated persons will be made available for training. Training may be at the office of Contractor or the Senator. The persons initially to be trained (including supervisors) are set forth in Attachment B. For each person to be trained there is also set forth the application or applications for which the person will be trained, and the schedule for training.

IV. EQUIPMENT AND SOFTWARE.

Contractor will supply and install the equipment and software set forth in Attachment C. For each terminal to be supplied there is also set forth the application or applications for which it will be used.

Contractor agrees to install upgrades and enhancements of hardware and software used in this test as it becomes available in Contractor's standard offerings to the General Services

Administration or to the commercial market. The Senator may refuse or defer such upgrades and enhancements if their installation might impede the work of the office or reduce the usefulness of the test.

V. CONTRACTOR SUPPORT.

Contractor will maintain hardware and software in operating condition satisfactory to the Senator. Contractor agrees to accept service calls between the hours of 8 a.m. and 5 p.m., Monday thru Friday * , and, when on-site maintenance is required, Contractor agrees to have a service technician capable of solving the problem at the site of the problem within 2 hours after receipt of the call. Service calls will be placed by the Senator to the Educational Services and Support Section of the Senate Computer Center (ESS), which will in turn notify the Contractor. During the hours when ESS is not manned, the Senator will call the Contractor directly and notify ESS of the call at the earliest opportunity.

* Except Government holidays.

VI. CONTINUATION OF SUPPORT.

Contractor will leave the hardware, software, and any supporting materials in the Office of the Senator for two years at no increase in price, and will provide support during such two-year period on the same terms specified in Part V.

VII. CANCELLATION BY SENATOR

The Senator may request the Committee to terminate this Agreement at any time.

VIII. NON-DISCLOSURE OF INFORMATION

Contractor will release no information obtained in carrying out the provisions of this agreement without the prior written consent of the Senator.

IX. The Contractor and Senator agree to enter into a proprietary Software License Agreement. Such agreement is set forth as Attachment D.

X. PRECEDENCE.

If there is any inconsistency between this agreement and the contract between Contractor and the Senate, the provisions of the latter will govern.

x Bill Armstrong

For Contractor
Robert L. Patenaude
Manager, Contracts & Pricing

Senator William Armstrong

Attachment A

PROPOSED SPERRYLINK SOFTWARE FOR U.S. SENATE

DESKSTATION SUPPORT PACKAGE

File/Document Creation

Word Processing

- Text Editing
- Text Calculating
- Text Formatting
- Sorting
- Line Drawing
- Printing

Administrative Services

- Electronic Scratch Pad
- Desktop Calculating
- Programmed Calculations
- Typing

Aids

- Menus
- Help Screens

Personal Computing

OFFICE SUPPORT PACKAGE

Electronic Filing/Retrieval

File Sharing

Archiving

Permanent File Drawer Space

Electronic Mail

Monthly Calendar

Automatic Notifications

Electronic Message Slips

Time-Of-Day Clock

ATTACHMENT B

TRAINEES FROM SENATOR ARMSTRONG'S OFFICE

Bob Potts

Debbie Buettner

Wendy Lechtner

Holly DeLuise

Jeanne Lawrence

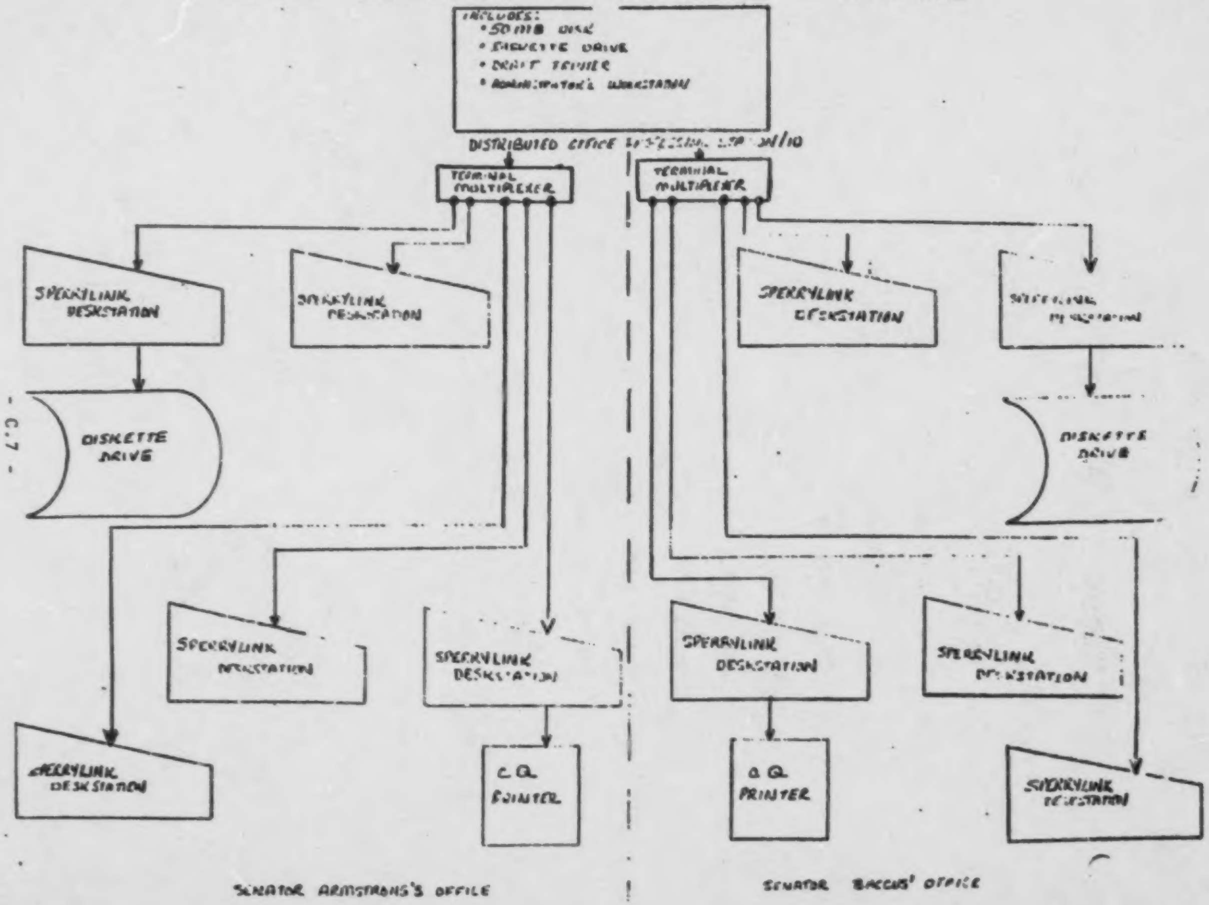
Antonette DeLauro

Welda Wagstaff

Julio Chavarric

Barbara Perdue

PROPOSED SPERRYLINK CONFIGURATION FOR U.S. SENATE


INCLUDES:
• 50 MB DISK
• DISKETTE DRIVE
• DRAFT PRINTER
• ADMINISTRATOR'S WORKSTATION
DISTRIBUTED OFFICE PROCESSING SYSTEM 11/10
TERMINAL MULTIPLEXER
TERMINAL MULTIPLEXER
SPERRYLINK DESKSTATION
SPERRYLINK DESKSTATION
SPERRYLINK DESKSTATION
SPERRYLINK DESKSTATION
DISKETTE DRIVE
DISKETTE DRIVE
SPERRYLINK DESKSTATION
SPERRYLINK DESKSTATION
SPERRYLINK DESKSTATION
SPERRYLINK DESKSTATION
SPERRYLINK DESKSTATION
SPERRYLINK DESKSTATION
L.Q. PRINTER
L.Q. PRINTER
SENATOR ARMSTRONG'S OFFICE
SENATOR BAUCUS' OFFICE

Attachment C

PROPOSED SENATE OA-PILOT CONFIGURATION

SPERRYLINK System Administrator/
To Be Shared By The Offices Of Senators Armstrong and Baucus

Type No.	Product	Quantity
3078-97	DOPS/10; incl. 50 MB	1
F2898-00	1 MB Diskette Expansion	1
0798-96	Draft Printer	1
C3588-01	96 Character ASCII	1
C3381-00	Power Cord	1
6284-00	Deskstation Support Package	1
6285-00	Office Support Package	1

Attachment C

Senator Armstrong's Office

Type No.	Product	Quantity
3521-97	SPERRYLINK Deskstation	5
8406-04	Diskette Drive	1
C3381-00	Power Cord	1
0791-87	Correspondence Quality Printer	1
C2959-00	English Language	1
F3540-00	Cut Sheet Feeder	1
F3692-00	Paper Tray (8½ X 11)	1
F6106-99	Copy Set-up Fee	1
F6106-00	Copy Fee for DSSP	1
8609-00	Terminal Multiplexer	1
C3378-00	Power Selection (100v)	1

ATTACHMENT D

LICENSE AGREEMENT

Contract Number Under Which
Equipment was Leased or Purchased:

Customer: Senator
William Armstrong
Installed at: Hart Senate Office Building
Room 528
Washington, D.C. 20510

1. Definitions:

The following terms shall have the meanings set forth below:

(a) "Technical Data" shall mean the then current standard human-readable Sperry Univac materials of a scientific or technical nature designated as proprietary which are prepared by Sperry Univac for customer use only with the Equipment or the Computer Programs. Technical Data does not include Computer Programs. Technical Data includes, but is not limited to, Computer Software Documentation and Equipment Maintenance Documentation delivered in human-readable form.

(b) "Equipment" shall mean all of the items of equipment to be delivered by Sperry Univac pursuant to the terms of the Contract as modified and/or extended.

(c) "Computer Programs" shall mean the Sperry Univac machine-readable proprietary operating systems, routines, subroutines, translators, assemblers, compilers, interpreters, data management systems, utility programs, sort-merge programs, maintenance/diagonostic programs, applications programs and updates thereto which Sperry Univac shall designate as proprietary and shall announce delivery for the Equipment while this Agreement is in effect, and which have been designated by Sperry Univac for use by customers.

(d) "Computer Software Documentation" shall mean Technical Data, including computer listings and printouts, in human-readable form which (i) documents the design or details of Computer Programs (ii) explains the capabilities of the Computer Programs, or (iii) provides operating instructions for using the Computer Programs to obtain desired results from a computer.

(e) "Site" shall mean the room or rooms within which each unit of Equipment is installed.

2. Term of Agreement

This Agreement shall become effective upon acceptance by both of the parties. It shall continue in effect for as long as the Government shall lease the Equipment. Upon termination of the lease, the Computer Programs and Technical Data shall be returned to Sperry Univac with the Equipment. If the Equipment is purchased by the Government, the Agreement shall remain in effect for so long as the Government retains ownership of the Equipment. In the event the Government sells or disposes of the Equipment, this Agreement shall be terminated and the Government shall return the Computer Programs and Technical Data to Sperry Univac or shall destroy and certify destruction to Sperry Univac.

3. Terms of Use

(a) Execution of this Agreement shall entitle the Government to use the Technical Data and Computer Programs with the Equipment at the Site for any and all hours during the Term of this Agreement.

(b) The Government acceptance of any future delivery of a Computer Program or Technical Data acknowledges that such items are covered by this Agreement.

4. Computer Programs

(a) Sperry Univac hereby grants to the Government and the Government accepts from Sperry Univac for the term hereof a non-transferable and non-exclusive license to install and use the Computer Programs only with the Equipment at the Site for which or with it was acquired, including use at any Government Site to which the Equipment may be transferred by the Government.

(b) The Computer Programs are the property of Sperry Univac, are proprietary to Sperry Univac, and are furnished to the Government with the following restricted rights. The Government shall keep confidential and protect the contents of the Computer Programs or any part thereof from unauthorized disclosure by its agents or employees. The Government, without the prior written consent of Sperry Univac, is not granted any right to copy in whole or in part the Computer Programs or any part thereof provided under this Agreement except that the Government may (i) use the Computer Programs with a backup computer during the period the Equipment for which or with which they were acquired is inoperative and (ii) make a copy of each Computer Program for archives safekeeping or backup purposes. The Government agrees that it will not sell, disclose, or otherwise make the Computer Programs available to anyone other than its employees. Upon discontinuance of rental of the Equipment or upon sale or disposition of Equipment purchased by the Government; the Government agrees to return to Sperry Univac or, if such return is impossible or impractical, to destroy all Computer Programs supplied by Sperry Univac hereunder and shall certify such destruction to Sperry Univac in writing.

Computer listings and printouts prepared by or for the Government of Computer Programs delivered by Sperry Univac shall not be treated as Technical Data, and the Government shall have only restricted rights ,to such computer listings and printouts of Computer Programs delivered by Sperry Univac with restricted rights.

(c) The Government may modify or adapt any Computer Program for its own use at its own expense to meet its specific requirements and permission to make such modification and adaptation is hereby granted. Any portions of the Computer Programs included in such modifications or adaptations shall be subject to the same restricted rights as have been designated in this Agreement for the original Computer Porgrams.

SOLICITATION NO.

5. Technical Data

(a) Sperry Univac hereby grants to Government and the Government hereby accepts from Sperry Univac for the term hereof a non-transferable and non-exclusive license to use Sperry Univac proprietary Technical Data only with the Equipment and Computer Programs for which or with which it was acquired. Technical Data includes that which Sperry Univac distributes by rental, lease or loan subject to restrictions on disclosure.

(b) Technical Data designated as proprietary by Sperry Univac is the property of Sperry Univac and is furnished to the Government with the following limited rights. The Government shall have the right to use, duplicate or disclose Technical Data by or for the Government in connection with the Equipment at the Site with the express limitation that such Technical Data shall not, without Sperry Univac's prior written consent, be (a) released or disclosed in whole or in part outside the Government, (b) used in whole or in part by the Government, in the case of Computer Software Documentation, for preparing the same or similar Computer Programs, or (c) used by a party other than the Government, except for:

(i) Emergency purposes by or for the Government provided that disclosure outside the Government shall be made subject to a prohibition against further use, release or disclosure; or

(ii) Release to a foreign Government, in the interest of the United States, only for information or evaluation within such Government or for emergency repair or overhaul; work by or for such foreign Government under the conditions of (i) above.

(d) Upon discontinuance of rental of the Equipment or use of the associated Computer Programs by the Government or upon sale or disposition of Equipment purchased by the Government, the Government agrees to return to Sperry Univac or destroy all proprietary Technical Data supplied by Sperry Univac hereunder.

SOLICITATION NO.

6. **Material Bearing Copyright Notice**

Sperry Univac hereby grants to the Government for Government purposes a royalty-free, non-exclusive and irrevocable world-wide license under any copyright owned by Sperry Univac to reproduce, translate and distribute all material bearing a copyright notice; provided, however, with respect to Computer Programs furnished with restricted rights or to Technical Data furnished with limited rights (including, but not limited to, Computer Software Documentation and proprietary manuals/materials for installation, operation, maintenance or training purposes which were developed at private expense), the scope of this copyright license is limited to the rights defined in Paragraphs 4 and 5 above.

SPERRY UNIVAC DIVISION
SPERRY CORPORATION

Robert L. Patenaude

Manager, Contracts & Pricing

CUSTOMER ACCEPTANCE

x Bill Armstrong

Senator William Armstrong
Type Name

Title Date

Signature

SOLICITATION NO.

United States Senate

CONTRACT

This contract is made and entered into this 9th day of March, 19 83, between the United States Senate (the Senate), by the Committee on Rules and Administration of the Senate (the Committee), and Sperry Corporation (the Contractor).

It is hereby agreed that the Senate retains the Contractor to render the following specialized services, under the supervision of the Committee:

> A test of office automation in the office of Senator Max Baucus as set forth in the attached agreement between the Senator and the Contractor which agreement is incorporated in and is made part of this contract.

For the services to be provided under this agreement, the Contractor will be paid a sum not to exceed $ 2,000.00 per month for each month that such services are provided up to a total of 24 months, subject to the availability of appropriated funds. Such reimbursement to the Contractor shall be paid monthly from funds available in the appropriations for "Miscellaneous Items" in the contingent fund of the Senate upon vouchers approved by the Chairman of the Committee and upon receipt of statements from the Contractor with supporting data and a certification from the Senator that the services were received. The judgment of the Committee on Rules and Administration shall be final and conclusive with respect to the validity of claims for reimbursement of such expenses.

It is understood that the Senator may request the Committee to terminate this Agreement at any time. It is further understood that the Committee may terminate this agreement at any time with 30 days notice. In the case of termination, payment shall be based on the support provided up to the date of termination. If this Agreement is terminated without notice or with less than 30 days notice, payment shall include an amount equal to the rental cost of the equipment for 30 days minus the number of days between termination and the notice of termination.

The Senate accepts no liability for loss or damage to equipment until installed and operational.

Any disagreements between the Contractor and the Senator which cannot be resolved by negotiation shall be presented to the Committee for resolution. The decision of the Committee shall be final and conclusive.

The Contractor further agrees and warrants that it:

1. Has not employed (other than a full-time, bona fide employee working solely for the Contractor) to solicit or obtain this Agreement for any commission, percentage, brokerage or contingent fee;

2. Will save the Government harmless from liability in performance;

3. Will release no information obtained in carrying out the provisions of the contract without prior consent of the Committee;

4. Will not subcontract or assign elsewhere any of the work or service involved without prior consent of the contracting Committee; and

5. Will not discriminate in its performance of this Agreement because of race, color, religion, national origin, sex, age, or state of physical handicap, and shall comply with all laws appertaining to the compensation of labor.

6. Has no conflict of interest, direct or indirect, financial or otherwise, which would be applicable to the performance obligations covered by this agreement.

No Member or Delegate to Congress, or Resident Commissioner, shall be admitted to any share or part of this contract or to any benefit that may arise therefrom.

Contractor

Manager, Contracts & Pricing
Robert L. Patenaude

Committee on Rules
and Administration

Chairman
Charles Mc C. Mathias, Jr.

Wendell H. Ford
Ranking Minority Member
Wendell H. Ford

United States Senate

AGREEMENT

This agreement is entered into this 9th day of March, 19 83 , between Senator Max Baucus , (the Senator), and Sperry Corporation , (Contractor)

I. GENERAL DESCRIPTION.

This is an agreement for a test of office automation in the Office of the Senator, intended to define the work under a contract between Contractor and the United States Senate. There shall be no liability on the part of the Senate or the Contractor until this agreement is incorporated in a contract between the Contractor and the Senate.

II. APPLICATIONS TO BE SUPPORTED.

Contractor agrees to supply office automation hardware, software, training, and maintenance in support of the activities in the Senator's office described in Attachment A.

III. TRAINING.

Contractor agrees to train staff members or their replacements employed by the Senator to the extent necessary for the use of office automation for the applications designated in Part II. The Senator agrees that the designated persons will be made available for training. Training may be at the office of Contractor or the Senator. The persons initially to be trained (including supervisors) are set forth in Attachment B. For each person to be trained there is also set forth the application or applications for which the person will be trained, and the schedule for training.

IV. EQUIPMENT AND SOFTWARE.

Contractor will supply and install the equipment and software set forth in Attachment C. For each terminal to be supplied there is also set forth the application or applications for which it will be used.

Contractor agrees to install upgrades and enhancements of hardware and software used in this test as it becomes available in Contractor's standard offerings to the General Services

Administration or to the commercial market. The Senator may refuse or defer such upgrades and enhancements if their installation might impede the work of the office or reduce the usefulness of the test.

V. CONTRACTOR SUPPORT.

Contractor will maintain hardware and software in operating condition satisfactory to the Senator. Contractor agrees to accept service calls between the hours of 8 a.m. and 5 p.m., Monday thru Friday * , and, when on-site maintenance is required, Contractor agrees to have a service technician capable of solving the problem at the site of the problem within 2 hours after receipt of the call. Service calls will be placed by the Senator to the Educational Services and Support Section of the Senate Computer Center (ESS), which will in turn notify the Contractor. During the hours when ESS is not manned, the Senator will call the Contractor directly and notify ESS of the call at the earliest opportunity.

* Except Government holidays.

VI. CONTINUATION OF SUPPORT.

Contractor will leave the hardware, software, and any supporting materials in the Office of the Senator for two years at no increase in price, and will provide support during such two-year period on the same terms specified in Part V.

VII. CANCELLATION BY SENATOR

The Senator may request the Committee to terminate this Agreement at any time.

VIII. NON-DISCLOSURE OF INFORMATION

Contractor will release no information obtained in carrying out the provisions of this agreement without the prior written consent of the Senator.

IX. The Contractor and Senator agree to enter into a proprietary Software License Agreement. Such agreement is set forth as Attachment D.

X PRECEDENCE.

If there is any inconsistency between this agreement and the contract between Contractor and the Senate, the provisions of the latter will govern.

For Contractor
Robert L. Patenaude
Manager, Contracts & Pricing

Max Baucus
Senator Max Baucus

Attachment A

PROPOSED SPERRYLINK SOFTWARE FOR U.S. SENATE

DESKSTATION SUPPORT PACKAGE

File/Document Creation

Word Processing

- Text Editing
- Text Calculating
- Text Formatting
- Sorting
- Line Drawing
- Printing

Administrative Services

- Electronic Scratch Pad
- Desktop Calculating
- Programmed Calculations
- Typing

Aids

- Menus
- Help Screens

Personal Computing

OFFICE SUPPORT PACKAGE

Electronic Filing/Retrieval

File Sharing

Archiving

Permanent File Drawer Space

Electronic Mail

Monthly Calendar

Automatic Notifications

Electronic Message Slips

Time-Of-Day Clock

Attachment B

Trainees From Senator Baucus' Office

Jose Guillen
Judy Campbell
Marie Davis
Marcie Evans
John Flink
Margaret Kilbourne
Carole Long
Maureen Rice
Marge Stavrianos
Stephanie Zanelotti

Attachment C

PROPOSED SENATE OA-PILOT CONFIGURATION

SPERRYLINK System Administrator/
To Be Shared By The Offices Of Senators Armstrong and Baucus

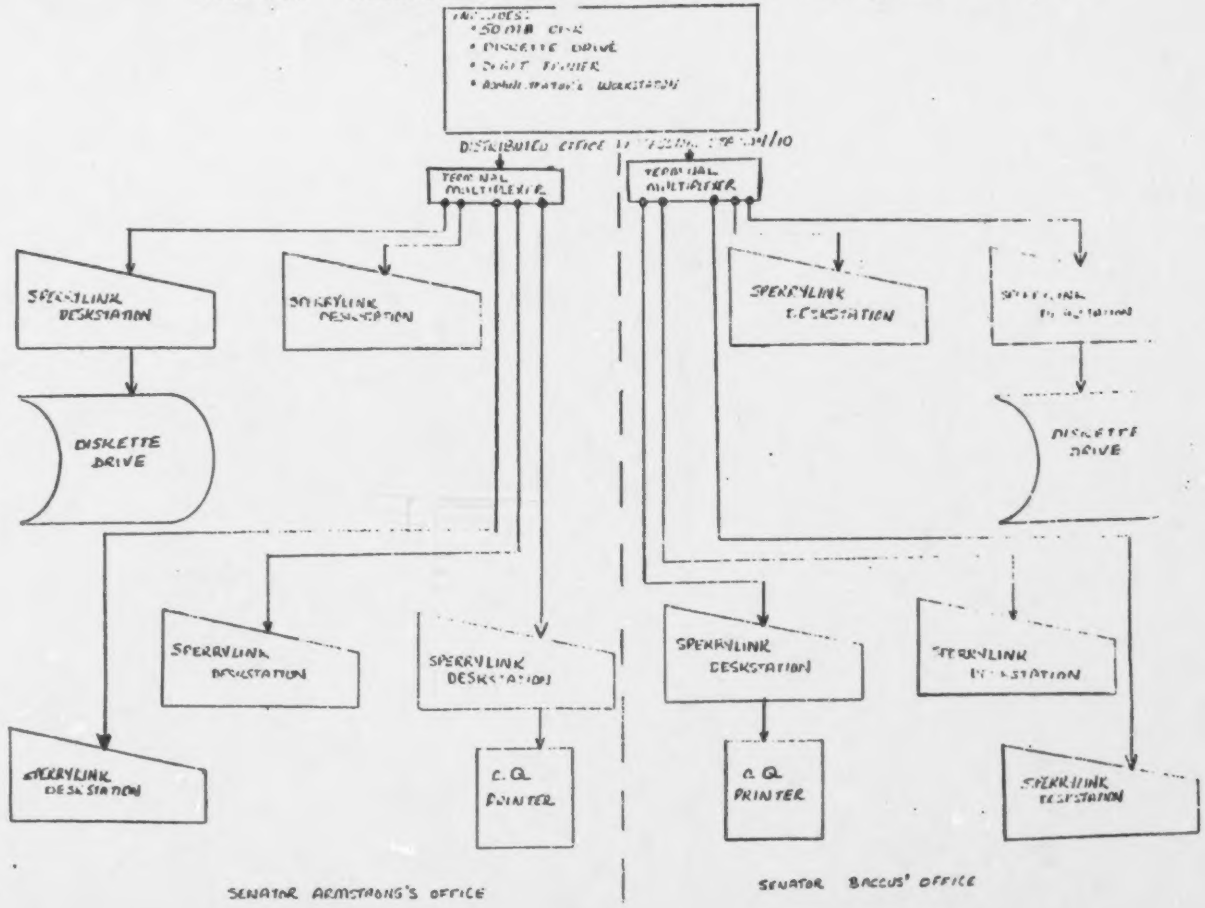
Type No.	Product	Quantity
3078-97	DOPS/10; incl. 50 MB	1
F2898-00	1 MB Diskette Expansion	1
0798-96	Draft Printer	1
C3588-01	96 Character ASCII	1
C3381-00	Power Cord	1
6284-00	Deskstation Support Package	1
6285-00	Office Support Package	1

Attachment C

Senator Baucus' Office

Type No.	Product	Quantity
3521-97	SPERRYLINK Deskstation	5
8406-04	Diskette Drive	1
C3381-00	Power Cord	1
0791-81	Correspondence Quality Printer	1
C2959-00	English Language	1
F3540-00	Cut Sheet Feeder	1
F3692-00	Paper Tray (8½ X 11)	1
F6106-99	Copy Set-up Fee	1
F6106-00	Copy Fee for DSSP	1
8609-00	Terminal Multiplexer	1
C3378-00	Power Selection (100v)	1

PROPOSED SPERRYLINK CONFIGURATION FOR U.S. SENATE


INCLUDES:
• 50 MB DISK
• DISKETTE DRIVE
• DRAFT PRINTER
• ADMINISTRATOR'S WORKSTATION
DISTRIBUTED OFFICE [illegible] 11/10
TERMINAL MULTIPLEXER
TERMINAL MULTIPLEXER
SPERRYLINK DESKSTATION
SPERRYLINK DESKSTATION
DISKETTE DRIVE
SPERRYLINK DESKSTATION
SPERRYLINK DESKSTATION
SPERRYLINK DESKSTATION
C.Q PRINTER
SPERRYLINK DESKSTATION
SPERRYLINK DESKSTATION
DISKETTE DRIVE
SPERRYLINK DESKSTATION
C.Q PRINTER
SPERRYLINK DESKSTATION
SPERRYLINK DESKSTATION
SENATOR ARMSTRONG'S OFFICE
SENATOR BAUCUS' OFFICE

~~ATTACHMENT D~~

LICENSE AGREEMENT

Contract Number Under Which
Equipment was Leased or Purchased:

Customer: **Senator**
Max Baucus

Installed at: **Hart Senate Office Building**
Room 706
Washington, D.C. 20510

1. Definitions:

The following terms shall have the meanings set forth below:

(a) "Technical Data" shall mean the then current standard human-readable Sperry Univac materials of a scientific or technical nature designated as proprietary which are prepared by Sperry Univac for customer use only with the Equipment or the Computer Programs. Technical Data does not include Computer Programs. Technical Data includes, but is not limited to, Computer Software Documentation and Equipment Maintenance Documentation delivered in human-readable form.

(b) "Equipment" shall mean all of the items of equipment to be delivered by Sperry Univac pursuant to the terms of the Contract as modified and/or extended.

(c) "Computer Programs" shall mean the Sperry Univac machine-readable proprietary operating systems, routines, subroutines, translators, assemblers, compilers, interpreters, data management systems, utility programs, sort-merge programs, maintenance/diagonostic programs, applications programs and updates thereto which Sperry Univac shall designate as proprietary and shall announce delivery for the Equipment while this Agreement is in effect, and which have been designated by Sperry Univac for use by customers.

(d) "Computer Software Documentation" shall mean Technical Data, including computer listings and printouts, in human-readable form which (i) documents the design or details of Computer Programs (ii) explains the capabilities of the Computer Programs, or (iii) provides operating instructions for using the Computer Programs to obtain desired results from a computer.

SOLICITATION NO.

(e) "Site" shall mean the room or rooms within which each unit of Equipment is installed.

2. Term of Agreement

This Agreement shall become effective upon acceptance by both of the parties. It shall continue in effect for as long as the Government shall lease the Equipment. Upon termination of the lease, the Computer Programs and Technical Data shall be returned to Sperry Univac with the Equipment. If the Equipment is purchased by the Government, the Agreement shall remain in effect for so long as the Government retains ownership of the Equipment. In the event the Government sells or disposes of the Equipment, this Agreement shall be terminated and the Government shall return the Computer Programs and Technical Data to Sperry Univac or shall destroy and certify destruction to Sperry Univac.

3. Terms of Use

(a) Execution of this Agreement shall entitle the Government to use the Technical Data and Computer Programs with the Equipment at the Site for any and all hours during the Term of this Agreement.

(b) The Government acceptance of any future delivery of a Computer Program or Technical Data acknowledges that such items are covered by this Agreement.

4. Computer Programs

(a) Sperry Univac hereby grants to the Government and the Government accepts from Sperry Univac for the term hereof a non-transferable and non-exclusive license to install and use the Computer Programs only with the Equipment at the Site for which or with it was acquired, including use at any Government Site to which the Equipment may be transferred by the Government.

(b) The Computer Programs are the property of Sperry Univac, are proprietary to Sperry Univac, and are furnished to the Government with the following restricted rights. The Government shall keep confidential and protect the contents of the Computer Programs or any part thereof from unauthorized disclosure by its agents or employees. The Government, without the prior written consent of Sperry Univac, is not granted any right to copy in whole or in part the Computer Programs or any part thereof provided under this Agreement except that the Government may (i) use the Computer Programs with a backup computer during the period the Equipment for which or with which they were acquired is inoperative and (ii) make a copy of each Computer Program for archives safekeeping or backup purposes. The Government agrees that it will not sell, disclose, or otherwise make the Computer Programs available to anyone other than its employees. Upon discontinuance of rental of the Equipment or upon sale or disposition of Equipment purchased by the Government; the Government agrees to return to Sperry Univac or, if such return is impossible or impractical, to destroy all Computer Programs supplied by Sperry Univac hereunder and shall certify such destruction to Sperry Univac in writing.

Computer listings and printouts prepared by or for the Government of Computer Programs delivered by Sperry Univac shall not be treated as Technical Data, and the Government shall have only restricted rights to such computer listings and printouts of Computer Programs delivered by Sperry Univac with restricted rights.

(c) The Government may modify or adapt any Computer Program for its own use at its own expense to meet its specific requirements and permission to make such modification and adaptation is hereby granted. Any portions of the Computer Programs included in such modifications or adaptations shall be subject to the same restricted rights as have been designated in this Agreement for the original Computer Porgrams.

5. Technical Data

(a) Sperry Univac hereby grants to Government and the Government hereby accepts from Sperry Univac for the term hereof a non-transferable and non-exclusive license to use Sperry Univac proprietary Technical Data only with the Equipment and Computer Programs for which or with which it was acquired. Technical Data includes that which Sperry Univac distributes by rental, lease or loan subject to restrictions on disclosure.

(b) Technical Data designated as proprietary by Sperry Univac is the property of Sperry Univac and is furnished to the Government with the following limited rights. The Government shall have the right to use, duplicate or disclose Technical Data by or for the Government in connection with the Equipment at the Site with the express limitation that such Technical Data shall not, without Sperry Univac's prior written consent, be (a) released or disclosed in whole or in part outside the Government, (b) used in whole or in part by the Government, in the case of Computer Software Documentation, for preparing the same or similar Computer Programs, or (c) used by a party other than the Government, except for:

(i) Emergency purposes by or for the Government provided that disclosure outside the Government shall be made subject to a prohibition against further use, release or disclosure; or

(ii) Release to a foreign Government, in the interest of the United States, only for information or evaluation within such Government or for emergency repair or overhaul: work by or for such foreign Government under the conditions of (i) above.

(d) Upon discontinuance of rental of the Equipment or use of the associated Computer Programs by the Government or upon sale or disposition of Equipment purchased by the Government, the Government agrees to return to Sperry Univac or destroy all proprietary Technical Data supplied by Sperry Univac hereunder.

SOLICITATION NO.

6. Material Bearing Copyright Notice

Sperry Univac hereby grants to the Government for Government purposes a royalty-free, non-exclusive and irrevocable world-wide license under any copyright owned by Sperry Univac to reproduce, translate and distribute all material bearing a copyright notice; provided, however, with respect to Computer Programs furnished with restricted rights or to Technical Data furnished with limited rights (including, but not limited to, Computer Software Documentation and proprietary manuals/materials for installation, operation, maintenance or training purposes which were developed at private expense), the scope of this copyright license is limited to the rights defined in Paragraphs 4 and 5 above.

SPERRY UNIVAC DIVISION
SPERRY CORPORATION

Robert L. Patenaude

Manager, Contracts & Pricing

CUSTOMER ACCEPTANCE

Max Baucus
Senator Max Baucus
Type Name

3/17/83
Title Date

Signature

SOLICITATION NO.

United States Senate

CONTRACT

This contract is made and entered into this _______ day of March, 1983, between the United States Senate (the Senate), by the Committee on Rules and Administration of the Senate (the Committee), and Digital Equipment Corporation (the Contractor).

It is hereby agreed that the Senate retains the Contractor to render the following specialized services, under the supervision of the Committee:

> A test of office automation in the office of Senator Bill Bradley as set forth in the attached agreement between the Senator and the Contractor which agreement is incorporated in and is made part of this contract.

For the services to be provided under this agreement, the Contractor will be paid a sum not to exceed $ 2,000. per month for each month that such services are provided up to a total of 24 months, subject to the availability of appropriated funds. Such reimbursement to the Contractor shall be paid monthly from funds available in the appropriations for "Miscellaneous Items" in the contingent fund of the Senate upon vouchers approved by the Chairman of the Committee and upon receipt of statements from the Contractor with supporting data and a certification from the Senator that the services were received. The judgment of the Committee on Rules and Administration shall be final and conclusive with respect to the validity of claims for reimbursement of such expenses.

It is understood that the Senator may request the Committee to terminate this Agreement at any time. It is further understood that the Committee may terminate this agreement at any time with 30 days notice. In the case of termination, payment shall be based on the support provided up to the date of termination. If this Agreement is terminated without notice or with less than 30 days notice, payment shall include an amount equal to the rental cost of the equipment for 30 days minus the number of days between termination and the notice of termination.

The Senate accepts no liability for loss or damage to equipment until installed and operational.

Any disagreements between the Contractor and the Senator which cannot be resolved by negotiation shall be presented to the Committee for resolution. The decision of the Committee shall be final and conclusive.

The Contractor further agrees and warrants that it:

1. Has not employed any person to solicit or obtain this Agreement for any commission, percentage, brokerage or contingent fee;

2. Will save the Government harmless from liability in performance;

3. Will release no information obtained in carrying out the provisions of the contract without prior consent of the Committee;

4. Will not subcontract or assign elsewhere any of the work or service involved without prior consent of the contracting Committee; and

5. Will not discriminate in its performance of this Agreement because of race, color, religion, national origin, sex, age, or state of physical handicap, and shall comply with all laws appertaining to the compensation of labor.

6. Has no conflict of interest, direct or indirect, financial or otherwise, which would be applicable to the performance obligations covered by this agreement.

No Member or Delegate to Congress, or Resident Commissioner, shall be admitted to any share or part of this contract or to any benefit that may arise therefrom.

Contractor	Committee on Rules and Administration
Robt T Emerson Robert Emerson Contracts Manager	Chairman
______________________	Wendell H. Ford Ranking Minority Member

United States Senate

AGREEMENT

This agreement is entered into this ________ day of March, 19 83, between Senator Bill Bradley, (the Senator), and Digital Equipment Corporation, (Contractor)

I. GENERAL DESCRIPTION.

This is an agreement for a test of office automation in the Office of the Senator, intended to define the work under a contract between Contractor and the United States Senate. There shall be no liability on the part of the Senate or the Contractor until this agreement is incorporated in a contract between the Contractor and the Senate.

II. APPLICATIONS TO BE SUPPORTED.

ntractor agrees to supply office automation hardware, software, training, and maintenance in support of the activities in the Senator's office described in Attachment A.

III. TRAINING.

Contractor agrees to train staff members or their replacements employed by the Senator to the extent necessary for the use of office automation for the applications designated in Part II. The Senator agrees that the designated persons will be made available for training. Training may be at the office of Contractor or the Senator. The persons initially to be trained (including supervisors) are set forth in Attachment B. For each person to be trained there is also set forth the application or applications for which the person will be trained, and the schedule for training.

IV. EQUIPMENT AND SOFTWARE.

Contractor will supply and install the equipment and software set forth in Attachment C. For each terminal to be supplied there is also set forth the application or applications for which it will used.

Contractor agrees to install upgrades and enhancements of hardware and software used in this test as it becomes available in Contractor's standard offerings to the General Services

Administration or to the commercial market. The Senator may refuse or defer such upgrades and enhancements if their installation might impede the work of the office or reduce the usefulness of the test.

V. CONTRACTOR SUPPORT.

Contractor will maintain hardware and software in operating condition satisfactory to the Senator. Contractor agrees to accept service calls between the hours of 8 and 5, 5 days a week, and, when on-site maintenance is required, Contractor agrees to have a service technician capable of solving the problem at the site of the problem within 4 hours after receipt of the call. Service calls will be placed by the Senator to the Educational Services and Support Section of the Senate Computer Center (ESS), which will in turn notify the Contractor. During the hours when ESS is not manned, the Senator will call the Contractor directly and notify ESS of the call at the earliest opportunity.

VI. CONTINUATION OF SUPPORT.

Contractor will leave the hardware, software, and any supporting materials in the Office of the Senator for two years at no increase in price, and will provide support during such two-year period on the same terms specified in Part V.

VII. CANCELLATION BY SENATOR

The Senator may request the Committee to terminate this Agreement at any time.

VIII. NON-DISCLOSURE OF INFORMATION

Contractor will release no information obtained in carrying out the provisions of this agreement without the prior written consent of the Senator.

IX. PRECEDENCE.

If there is any inconsistency between this agreement and the contract between Contractor and the Senate, the provisions of the latter will govern.

Robert T. Emerson
Contractor
Robert Emerson
Contracts Manager

Bill Bradley
Senator Bill Bradley

ATTACHMENT A

This system will be designed to facilitate the following office functions:

- Word Processing (eg. speeches, press releases, testimonies, single correspondence, memos)
- Appointment Scheduling (ie. where the Senator has been - by county, and how often)
- Personnel Records (eg. keeping track of sick time, vacations, etc.)
- Storage and Retrieval of Speeches and Press Releases
- Keeping track of Senator's voting record

Training will be conducted as a combination of classroom and in-office support arranged to coincide with the installation of the equipment.

ATTACHMENT B

Richard Yurko	System Manager	
Ellen Laughlin	System Manager(Assistant)	
Susan Schiffrin	User	Scheduling
Laura Wilcox	User	Scheduling
Richard Lerner	User	WP
Leslie Devlin	User	WP
Mary Wilson	User	WP
Diane Ellison	User	WP

ATTACHMENT C

DECWORD/DP SYSTEM

ITEM	QUANTITY	MODEL NO.	EQUIPMENT
1	1	SX7XGHA	11/24 system, (7) Async. Ports, 4MB Memory, 124 MB Disk, Terminals
2	1	TUA80-AA	Tape drive
3	5	VT102-WA	Terminals
4	1	LQP02	Letter Quality Printer
5	1	LA120	High Speed Matrix Printer
6	5	DF03	Modems
7	1	QR480-DZ	RSTS/E Operating System
8	1	QR48-GZ	DECword/DP Application Software

·Digital will install this system and maintain it from the hours of 8 A.M. to 5 P.M. five (5) days a week. We will respond within four (4) hours from the time that a service call is logged.

United States Senate

CONTRACT

This contract is made and entered into this tenth day of February, 1983, between the United States Senate (the Senate), by the Committee on Rules and Administration of the Senate (the Committee), and the IBM Corporation (the Contractor).

It is hereby agreed that the Senate retains the Contractor to render the following specialized services, under the supervision of the Committee:

> A test of office automation in the office of Senator D'Amato as set forth in the attached agreement between the Senator and the Contractor which agreement is incorporated in and is made part of this contract.

For the services to be provided under this agreement, the Contractor will be paid a sum not to exceed $1,329.66 per month for each month that such services are provided up to a total of 24 months, subject to the availability of appropriated funds. Such reimbursement to the Contractor shall be paid monthly from funds available in the appropriations for "Miscellaneous Items" in the contingent fund of the Senate upon vouchers approved by the Chairman of the Committee and upon receipt of statements from the Contractor with supporting data and a certification from the Senator that the services were received. The judgment of the Committee on Rules and Administration shall be final and conclusive with respect to the validity of claims for reimbursement of such expenses.

It is understood that the Senator may request the Committee to terminate this Agreement at any time. It is further understood that the Committee may terminate this agreement at any time with 30 days notice. In the case of termination, payment shall be based on the support provided up to the date of termination. If this Agreement is terminated without notice or with less than 30 days notice, payment shall include an amount equal to the rental cost of the equipment for 30 days minus the number of days between termination and the notice of termination.

The Senate accepts no liability for loss or damage to equipment until installed and operational.

Any disagreements between the Contractor and the Senator which cannot be resolved by negotiation shall be presented to the Committee for resolution. The decision of the Committee shall be final and conclusive.

The Contractor further agrees and warrants that it:

1. Has not employed any person to solicit or obtain this Agreement for any commission, percentage, brokerage or contingent fee;

2. Will save the Government harmless from liability in performance;

3. Will release no information obtained in carrying out the provisions of the contract without prior consent of the Committee;

4. Will not subcontract or assign elsewhere any of the work or service involved without prior consent of the contracting Committee; and

5. Will not discriminate in its performance of this Agreement because of race, color, religion, national origin, sex, age, or state of physical handicap, and shall comply with all laws appertaining to the compensation of labor.

6. Has no conflict of interest, direct or indirect, financial or otherwise, which would be applicable to the performance obligations covered by this agreement.

No Member or Delegate to Congress, or Resident Commissioner, shall be admitted to any share or part of this contract or to any benefit that may arise therefrom.

Contractor

M. Clark Conlon
Manager of Federal Contracts
IBM Corporation
10401 Fernwood Road
Bethesda, MD 20817

Committee on Rules
and Administration

x
Chairman

x Wendell H. Ford
Ranking Minority Member

United States Senate

AGREEMENT

This agreement is entered into this tenth day of February, 1983, between Senator D'Amato, (the Senator), and the IBM Corporation, (Contractor)

I. GENERAL DESCRIPTION.

This is an agreement for a test of office automation in the Office of the Senator, intended to define the work under a contract between Contractor and the United States Senate. There shall be no liability on the part of the Senate or the Contractor until this agreement is incorporated in a contract between the Contractor and the Senate.

II. APPLICATIONS TO BE SUPPORTED.

Contractor agrees to supply office automation hardware, software, training, and maintenance in support of the activities in the Senator's office described in Attachment A.

III. TRAINING.

Contractor agrees to train staff members or their replacements employed by the Senator to the extent necessary for the use of office automation for the applications designated in Part II. The Senator agrees that the designated persons will be made available for training. Training may be at the office of Contractor or the Senator. The persons initially to be trained (including supervisors) are set forth in Attachment B. For each person to be trained there is also set forth the application or applications for which the person will be trained, and the schedule for training.

IV. EQUIPMENT AND SOFTWARE.

Contractor will supply and install the equipment and software set forth in Attachment C. For each terminal to be supplied there is also set forth the application or applications for which it will be used.

Contractor agrees to install upgrades and enhancements of hardware and software used in this test as it becomes available in Contractor's standard offerings to the General Services

Administration or to the commercial market. The Senator may refuse or defer such upgrades and enhancements if their installation might impede the work of the office or reduce the usefulness of the test.

V. CONTRACTOR SUPPORT.

Contractor will maintain hardware and software in operating condition satisfactory to the Senator. Contractor agrees to accept service calls between the hours of 8:00 a.m. and 5:30 p.m., five days a week, and, when on-site maintenance is required, Contractor agrees to have a service technician capable of solving the problem at the site of the problem within 6 hours after receipt of the call. Service calls will be placed by the Senator to the Educational Services and Support Section of the Senate Computer Center (ESS), which will in turn notify the Contractor. During the hours when ESS is not manned, the Senator will call the Contractor directly and notify ESS of the call at the earliest opportunity.

VI. CONTINUATION OF SUPPORT.

Contractor will leave the hardware, software, and any supporting materials in the Office of the Senator for two years at no increase in price, and will provide support during such two-year period on the same terms specified in Part V.

VII. CANCELLATION BY SENATOR

The Senator may request the Committee to terminate this Agreement at any time.

VIII. NON-DISCLOSURE OF INFORMATION

Contractor will release no information obtained in carrying out the provisions of this agreement without the prior written consent of the Senator.

IX. PRECEDENCE.

If there is any inconsistency between this agreement and the contract between Contractor and the Senate, the provisions of the latter will govern.

M Clark Conlon — Alfonse D'Amato

For Contractor — Senator

M. Clark Conlon
Manager of Federal Contracts
IBM Corporation

AGREEMENT NOTES

1. The following text is added to Paragraph 9. of this Agreement:

> In the event of any inconsistencies between this Agreement and the terms and conditions of the IBM GSA Schedule Contract, this Agreement shall govern. The terms and conditions of the IBM GSA Schedule Contract are incorporated herein by reference.

2. It is understood and agreed by both parties that the normal lease term for the equipment designated is 36 months. This equipment may be terminated prior to the completion of the lease term by the Committee invoking the termination for convenience of the Government clause contained in 41-CFR Section 1-8.705-1 (1982). For the purpose of any such termination, this agreement shall be considered a contract for services.

3. Prices are not subject to change.

A11F1V

ATTACHMENT A

Two word processing stations to perform word processing and records processing applications.

ATTACHMENT B

The following are to receive training in all functions of the system:

Shirley Underwood
Patricia Tierney
Donna Kaufman
~~Lamar~~ Hallisey
TAMARA

ATTACHMENT C

INSTALLATION FOR SENATOR D'AMATO

UNIT	MDL/FC	DESCRIPTION	QTY
5218	A02	Printwheel Printer	2
	1200	Auto Paper Handling Prereq	2
	1439502	Prestige Elite Typestyle	2
	2000	6 Meter (19.7 Ft) Cable	2
	7860	Sheet-Feed Paper Handler	2
6580	A06	320K Memory for 25 Line Display	2
	3300	25 Line Display	2
	5330	96 Character Keyboard	2
	7997	Printer Sharing	2
6360	022	Dual Diskette Unit - 2D	2
		Licensed Program Product	
5608	AX1	Administrative Support	2
	SR5	Reportpack	2
	TR6	Textpack 6	2

HARDWARE SOFTWARE AND MAINTENANCE COST TABLE FOR 24-MONTH TEST PERIOD

Hardware Configuration	$20,544.00
Maintenance	8,269.00
Software	2,929.00
Destination Charges	170.00
TOTAL	$31,912.00
Monthly Payment Amount (24 months)	$ 1,329.66

70C46Y1R

United States Senate

CONTRACT

This contract is made and entered into this _______ day of March, 1983, between the United States Senate (the Senate), by the Committee on Rules and Administration of the Senate (the Committee), and Xerox Corporation (the Contractor).

It is hereby agreed that the Senate retains the Contractor to render the following specialized services, under the supervision of the Committee:

> A test of office automation in the office of Senator Dennis DeConcini as set forth in the attached agreement between the Senator and the Contractor which agreement is incorporated in and is made part of this contract.

For the services to be provided under this agreement, the Contractor will be paid a sum not to exceed $ 2,000.00 per month for each month that such services are provided up to a total of 24 months, subject to the availability of appropriated funds. Such reimbursement to the Contractor shall be paid monthly from funds available in the appropriations for "Miscellaneous Items" in the contingent fund of the Senate upon vouchers approved by the Chairman of the Committee and upon receipt of statements from the Contractor with supporting data and a certification from the Senator that the services were received. The judgment of the Committee on Rules and Administration shall be final and conclusive with respect to the validity of claims for reimbursement of such expenses.

It is understood that the Senator may request the Committee to terminate this Agreement at any time. It is further understood that the Committee may terminate this agreement at any time with 30 days notice. In the case of termination, payment shall be based on the support provided up to the date of termination. If this Agreement is terminated without notice or with less than 30 days notice, payment shall include an amount equal to the rental cost of the equipment for 30 days minus the number of days between termination and the notice of termination.

The Senate accepts no liability for loss or damage to equipment until installed and operational.

Any disagreements between the Contractor and the Senator which cannot be resolved by negotiation shall be presented to the Committee for resolution. The decision of the Committee shall be final and conclusive.

The Contractor further agrees and warrants that it:

1. Has not employed any person to solicit or obtain this Agreement for any commission, percentage, brokerage or contingent fee;

2. Will save the Government harmless from liability in performance;

3. Will release no information obtained in carrying out the provisions of the contract without prior consent of the Committee;

4. Will not subcontract or assign elsewhere any of the work or service involved without prior consent of the contracting Committee; and

5. Will not discriminate in its performance of this Agreement because of race, color, religion, national origin, sex, age, or state of physical handicap, and shall comply with all laws appertaining to the compensation of labor.

6. Has no conflict of interest, direct or indirect, financial or otherwise, which would be applicable to the performance obligations covered by this agreement.

No Member or Delegate to Congress, or Resident Commissioner, shall be admitted to any share or part of this contract or to any benefit that may arise therefrom.

Contractor	Committee on Rules and Administration
	C. McC. Mathias Chairman
Information Processing Sales Manager	Wendell H. Ford Ranking Minority Member

United States Senate

AGREEMENT

This agreement is entered into this 7th day of March,
19 83, between Senator Dennis DeConcini, (the
Senator), and Xerox Corporation,
(Contractor)

I. GENERAL DESCRIPTION.

This is an agreement for a test of office automation in the Office of the Senator, intended to define the work under a contract between Contractor and the United States Senate. There shall be no liability on the part of the Senate or the Contractor until this agreement is incorporated in a contract between the Contractor and the Senate.

II. APPLICATIONS TO BE SUPPORTED.

Contractor agrees to supply office automation hardware, software, training, and maintenance in support of the activities in the Senator's office described in Attachment A.

III. TRAINING.

Contractor agrees to train staff members or their replacements employed by the Senator to the extent necessary for the use of office automation for the applications designated in Part II. The Senator agrees that the designated persons will be made available for training. Training may be at the office of Contractor or the Senator. The persons initially to be trained (including supervisors) are set forth in Attachment B. For each person to be trained there is also set forth the application or applications for which the person will be trained, and the schedule for training.

IV. EQUIPMENT AND SOFTWARE.

Contractor will supply and install the equipment and software set forth in Attachment C. For each terminal to be supplied there is also set forth the application or applications for which it will be used.

Contractor agrees to install upgrades and enhancements of hardware and software used in this test as it becomes available in Contractor's standard offerings to the General Services

Administration or to the commercial market. The Senator may refuse or defer such upgrades and enhancements if their installation might impede the work of the office or reduce the usefulness of the test.

V. CONTRACTOR SUPPORT.

Contractor will maintain hardware and software in operating condition satisfactory to the Senator. Contractor agrees to accept service calls between the hours of 8:00 am and 5:00 pm, 5 days a week, and, when on-site maintenance is required, Contractor agrees to have a service technician capable of solving the problem at the site of the problem within 6 hours after receipt of the call. Service calls will be placed by the Senator to the Educational Services and Support Section of the Senate Computer Center (ESS), which will in turn notify the Contractor. During the hours when ESS is not manned, the Senator will call the Contractor directly and notify ESS of the call at the earliest opportunity.

VI. CONTINUATION OF SUPPORT.

Contractor will leave the hardware, software, and any supporting materials in the Office of the Senator for two years at no increase in price, and will provide support during such two-year period on the same terms specified in Part V.

VII. CANCELLATION BY SENATOR

The Senator may request the Committee to terminate this Agreement at any time.

VIII. NON-DISCLOSURE OF INFORMATION

Contractor will release no information obtained in carrying out the provisions of this agreement without the prior written consent of the Senator.

IX. PRECEDENCE.

If there is any inconsistency between this agreement and the contract between Contractor and the Senate, the provisions of the latter will govern.

For Contractor
Information Processing
Sales Manager

Dennis DeConcini
Senator

ATTACHMENT A

APPLICATIONS TO BE SUPPORTED:

The primary application shall be word processing. Currently, the preparation of speeches, press releases, floor statements, ad-hoc letters and certain correspondence is done manually or on CMS. The 860 Information Processing System and the 820-II Personal Computer with their respective word processing software will simplify traditional text entry and editing functions. Upward compatibility between the two systems and the word processing software is provided through the 820/860 Conversion Utility. Thus documentation initially input at an 820-II could be easily edited, revised, and formatted for final output at either the 820-II or 860 IPS.

Another application identified includes office expense accounting and budgeting. The 820-II with SUPERCALC will automate these computing tasks that currently are very time consuming and tedious. SUPERCALC is an electronic worksheet for testing sets of variables needed to create budgets, spread sheets, statistical reports, forecasting and analysis.

Additionally, the ability to illustrate this statistical information graphically will be provided through the Business Graphics software package. Currently there is no easy method of creating graphic illustrations. As a result, they are not used or incorporated within documentatiton. The Business Graphics software will enable the office to automatically create charts and graphs.

The TTY Communications software will enable the office to expand the use of their 820-II by allowing them to tie into databases and services such as CMS, LEGIS, and SCORPIO, etc. They will have the the capability of accessing pertinent information from a variety of sources. The TTY software will allow the 820-II to function in a dumb terminal mode or as an intelligent terminal where information can be edited, processed, and changed before being sent. Additionally, received data can be reviewed as is, integrated into locally prepared text, or modified. (Modems will be provided by the Senate).

ATTACHMENT B

TRAINING:

Training for the following individuals, their applications and the systems on which they will be trained is as follows:

NAME	SYSTEM	APPLICATION
Romano Romani, Legislative Director	820-II	Word Processing
Steve Miller, Office Manager	820-II	Word Processing SuperCalc Business Graphics TTY
Kathy Fortune, Legislative Secretary	820-II	Word Processing Business Graphics
Julia Parker, Press Assistant Lynn Levins, Assistant Press Secretary	860 IPS, Partial Page	Word Processing Spell-Chek
TBA, Main Legislative Secretary	860 IPS, Full Page	Word Processing Spell-Chek

ATTACHMENT B (cont.)

820-II TRAINING:

The training for all 820-II applications will be on-site at the respective Senator's office. A conference room or similar facility will be provided in order to set up at least three (3) 820-II's to begin initial training on the primary application of word processing. There will be three (3) half-day training sessions for word processing.

Training for SuperCalc, Business Graphics, and TTY will be handled on an individual basis with the person assigned to that particular application. Each of these applications will involve a half day training session.

860 IPS TRAINING:

There are two options that the Senate has with regard to 860 IPS training. For each 860 IPS system, the Senate can send two (2) operators for a half day orientation seminar at the Xerox facility in Rosslyn. If this is not convenient, orientation training will be on-site in the respective Senator's office. Orientation training will cover basic word processing techniques--document creation, editting, printing, revising, etc. Following the orientation training there will be on-site training that will cover advanced editting, formatting, repetitive letters, Spell-Chek (spelling dictionary and verification package), and use of the 820/860 Conversion Utility.

ATTACHMENT C
(Senator De Concini)

EQUIPMENT & SOFTWARE CONFIGURATION

XEROX

	SYSTEM	APPLICATION(S)
1.	820-II 40 CPS Printer	Word Processing
2.	820-II 40 CPS Printer	Word Processing SuperCalc Business Graphics TTY
3.	820-II 40 CPS Printer	Word Processing Business Graphics
4.	860 IPS - Partial Page 40 CPS Printer	Word Processing 820/860 Conversion Utility Spell-Chek
5.	860 IPS - Full Page 40 CPS Printer Automatic Paper Feeder	Word Processing Spell-Chek 820/860 Conversion Utility

XEROX

PRICING

Prices for the 860 IPS are taken from the GSA Contract No. GS-OOC-03423.
Rental prices include service on the equipment.

860 PARTIAL PAGE SYSTEM:

Product Code	Component	Monthly Rental	Placement/Removal Charges
968	Standard Controller	$ 130.95	$55/55
163	Partial Page Display	$ 53.35	$20/20
165	Keyboard	$ 67.90	$20/20
190	Single Sided Disc Drive (2)	$ 58.20	none
249	128K Memory	$ 77.60	none
834	40 CPS Printer	$ 111.55	$40/40
250	Word Processing Software	none	none
TOTAL		$499.55	

860 FULL PAGE SYSTEM:

Product Code	Component	Monthly Rental	Placement/Removal Charges
968	Standard Controller	$ 130.95	$55/55
967	Full Page Display	$ 155.20	$20/20
998	Keyboard with CAT	$ 77.60	$20/20
190	Single Sided Disc Drive (2)	$ 58.20	none
249	128K Memory	$ 77.60	none
324	40 CPS Printer	$ 111.55	$40/40
568	Automatic Paper Feeder	$ 58.20	$40/40
250	Word Processing Software	none	none
TOTAL		$669.30	

820-II PERSONAL COMPUTER:

The 820-II Personal Computer is not available for rental on the current GSA Contract. Special pricing for purposes of this Senate office automation pilot have been determined. Component pricing for the 820-II will be as follows:

U03, 928	Display/Processor, Keyboard, 8" Single-sided, double density disc drives	$ 155.23
D80	40 CPS Printer	$ 115.00
TOTAL		$ 270.23

UNITED STATES SENATE

CONTRACT

This contract is made and entered into this 28th day of January, 1983, between the United States Senate (the SENATE), by the Committee on Rules and Administration of the SENATE (the COMMITTEE), and Honeywell Information Systems, Inc. (the CONTRACTOR).

It is hereby agreed that the SENATE retains the CONTRACTOR to render the following specialized services, under the supervision of the COMMITTEE.

> A test of Office Automation in the office of Senator Dole as set forth in the attached agreement between the Senator and the CONTRACTOR which agreement is incorporated in and is made part of this Contract.

For the services to be provided under this agreement, the CONTRACTOR will be paid a sum not to exceed $2000 per month per office for each month that such services are provided up to a total of 24 months. Such reimbursement to the CONTRACTOR shall be paid monthly from funds available in the appropriations for "Miscellaneous Items" in The Contingent Fund of the SENATE upon vouchers approved by the Chairman of the Committee and upon receipt of statements from the CONTRACTOR and a certification from the Senator that the services were received.

It is understood that the Senator may request the COMMITTEE to terminate this Agreement at any time. It is further understood that the COMMITTEE may terminate this agreement at any time with 30 days notice. In the case of termination, payment shall be based on the support provided up to the effective date of termination. If this agreement is terminated without notice or with less than 30 days notice, payment shall include an amount equal to the rental cost of the equipment for 30 days minus the number of days between termination and notice of termination.

The SENATE acepts no liability for loss or damage to equipment until installed and operational.

The CONTRACTOR further agrees and warrants that it:

1) Has not employed any person to solicit or obtain this agreement for any commission, percentage, brokerage, or contingent fees;

2) Except as expressly set forth in writing in this agreement and except for the implied warranty or merchantability, there are no warranties expressed or implied. In no event will the Contractor be liable to the Government for consequential damages as defined in the Uniform Commercial Code, Section 2-715 in effect in the District of Columbia as of January 1, 1973, i.e.: Consequential damages resulting from the seller's breach include:

(a) Any loss resulting from general or particular requirements and needs of which the seller at the time of contracting has reason to know and which could not reasonably be prevented by cover or otherwise; and

(b) Injury to person or property proximately resulting from any breach of warranty;

3) Will release no information obtained in carrying out the provisions of the contract without prior consent of the COMMITTEE;

4) Will not subcontract or assign elsewhere any of the work or service involved without prior consent of the contracting Committee; and

5) Will not discriminate in its performance of this Agreement because of race, color, religion, national origin, sex, age, or state of physical handicap, and shall comply with all laws appertaining to the compensation of labor.

6) Has no conflict of interest, direct or indirect, financial or otherwise, which would be applicable to the performance obligations covered by this agreement.

No Member or Delegate to Congress, or Resident Commissioner, shall be admitted to any share or part of this contract or to any benefit that may arise therefrom.

Contractor

Committee on Rules
and Administration

Chairman

Wendell H. Ford
Ranking Minority Member

UNITED STATES SENATE

AGREEMENT

This agreement is entered into this 28th day of January, 1983, between Senator Robert Dole, (the Senator), and Honeywell Information Systems, (Contractor).

I. GENERAL DESCRIPTION

This is an agreement for a test of office automation in the Office of the Senator, intended to define the work under a contract between Contractor and the United States Senate. There shall be no liability on the part of the Senate or the Contractor until this agreement is incorporated in a contract between the Contractor and the Senate.

II. APPLICATIONS TO BE SUPPORTED

Contractor agrees to supply office automation hardware, software, training, and maintenance in support of the activities in the Senator's office described in Attachment A.

III. TRAINING

Contractor agrees to train staff members or their replacements employed by the Senator to the extent necessary for the use of office automation for the applications designated in Part II. The Senator agrees that the designated persons will be made available for training. Training may be at the office of Contractor or the Senator. The persons to be trained (including supervisors) and the specific nature of the training to be furnished are set forth in Attachment B. For each person to be trained, there is also set forth the application or applications for which the person will be trained, and the schedule for training.

IV. EQUIPMENT AND SOFTWARE

Contractor will supply and install the equipment and software set forth in Attachment C. For each terminal to be supplied there is also set forth the application or applications for which it will be used.

Contractor agrees to install upgrades and enhancements of hardware and software used in this test as it becomes available in Contractor's standard offerings to the General Services Administration or to the commercial market. The Senator may refuse or defer such upgrades and enhancements if their installation might impede the work of the office or reduce the usefulness of the test.

V. CONTRACTOR SUPPORT

Contractor will lease/maintain hardware and license software in accordance with the terms and conditions of the attached FY83 Honeywell Authorized ADP Schedule, Office Automation Systems Section, Special Item 132-1 and Special Item 132-20 respectively. The Principal Period of Maintenance (PPM) is 8 a.m. - 6 p.m., five days a week. Response time is next half working day, Principal Period of Maintenance within 30 miles of a Honeywell Service Center.

VI CONTINUATION OF SUPPORT

Contractor will leave the hardware, software, and any supporting materials in the Office of the Senator for two years at no increase in price, and will provide maintenance support during such two-year period on the same terms specified in Part V.

VII. CANCELLATION BY SENATOR

The Senator may request the Committee to terminate this Agreement at any time.

VIII. NON-DISCLOSURE OF INFORMATION

Contractor will release no information obtained in carrying out the provisions of this agreement without the prior written consent of the Senator.

IX. PRECEDENCE

If there is any inconsistency between this agreement and the contract between Contractor and the Senate, the provisions of the latter will govern.

For Contractor

Bob Dole
Senator

UNITED STATES SENATE

ATTACHMENT A

Office of Senator Dole

Activities (Functions) to be supported:

1. Ad-hoc letters
2. Floor statements
3. Press releases
4. Reports and memos
5. Voucher preparation
6. Office expense budgeting and tracking (not accounting)
7. Personnel history
8. Scheduling (calendar - daily, weekly, monthly)

UNITED STATES SENATE

ATTACHMENT B

Office of Senator Dole

Trainees

1. Ruth Ann Komarek
2. Beth Abrams
3. Karleen Durrenberger
4. Betty Myer
5. Jo-Anne Coe
6. Beth Seto

Training Schedule

Training dates will be coordinated with installation of equipment so that classroom instruction will occur after delivery of hardware. Specific dates will be arranged at the mutual agreement of both parties.

Training Description

Honeywell will train six (6) persons in training classes to be held at our local training facility. Classroom instruction will total seven (7) days, but will not be taught in a seven day consecutive period. All trainees will be instructed on all functionalities of the OAS software which includes: Word Processing, File Management, Electronic Mail, Calculator, Records Processing, Calendar, Infocalc, and System Administration. Daily support will be available through our Technical Assistance Center via an 800 number between the hours of 8 a.m. - 6 p.m., Monday through Friday. Continuing on-site support will be provided on an as needed basis at no extra charge for up to, but not more than, ninety (90) days after the installation of the system in Senator Dole's office. After that time, per call additional on-site support or follow-up support is available at charges ranging from $59 per hour to $139 per hour, depending on the complexity of the situation. Additional training center classes are available at the published rates and are available upon request.

UNITED STATES SENATE

ATTACHMENT C

HARDWARE

QTY	MODEL	DESCRIPTION	UNIT PURCHASE	EXTENDED PURCHASE
1	CPX9834	DPS6/34 SUBSYS. (INCL 80MB CMD)	$30,000	$30,000
1	CMM9631	256KB MEM EXP.	4,500	4,500
2	PRU7007	35 CPS LQP	3,200	6,400
4	VIP7303	KEYBD TERMINAL	1,900	7,600
2	CBL9611	CBL 25 FT.	80	160
2	VCW1701	1 FT. W17 CABLE	26	52
1	DCM9601	2 ASYNC RS232C	1,000	1,000
1	DCM9637	2 RS422 PORTS	1,000	1,000
1	DCF9603	DUAL D.C. PORTS	1,500	1,500
1	PRF1005	DUAL TRAY SHEET FEEDER	1,800	1,800
1	PRF0006	ADAPTOR PLATE	200	200
				$54,212

1) With 25 ft. cable, is preconfigured at 50 ft.
2) With 25 ft. cable, may be configured w/cable to 4000 ft. at additional cost.

TOTAL MONTHLY CHARGE $2,000

SOFTWARE

QTY	MODEL	DESCRIPTION
1	SHS121V	GCOS 6 MOD 400, REV. 2.1
1	AHP140V	OAS FACILITY UNDER MOD 400
1	AHP142V	INFOCALC

*Specific terminal applications to be determined by System Administrator as workload dictates. Each terminal has full OAS functionality and can support all applications (functions).

UNITES STATES SENATE

SPECIAL PRICING CONSIDERATIONS

Purchase discount applicable only to initial purchase of hardware.

Forty-six percent (46%) purchase option credits of total monthly charge to be accrued during the first twelve (12) month period only.

Pricing terms applicable only for a twenty-four (24) month period.

Pricing terms applicable only to two (2) "pilot" systems.

UNITED STATES SENATE

CONTRACT

This contract is made and entered into this 10th day of March, 1983, between the United States Senate (the Senate), by the Committee on Rules and Administration of the Senate (the Committee), and WANG LABORATORIES, INC, (the Contractor).

It is hereby agreed that the Senate retains the Contractor to render the following specialized services, under the supervision of the Committee:

> A test of office automation in the offices of Senators Warner and Huddleston as set forth in the attached agreement between the Senators and the Contractor which agreement is incorporated in and is made part of this contract.

For the services to be provided under this agreement, the Contractor will be paid a sum not to exceed $ 2,000.00 per month/per system for each month that such services are provided up to a total of 24 months, subject to the availability of appropriated funds. Such reimbursement to the Contractor shall be paid monthly from funds available in the appropriations for "Miscellaneous Items" in the contingent fund of the Senate upon vouchers approved by the Chairman of the Committee and upon receipt of statements from the Contractor with supporting data and a certification from the Senator that the services were received. The judgment of the Committee on Rules and Administrations shall be final and conclusive with respect to the validity of claims for reimbursement of such expenses.

It is understood that the Senator may request the Committee to terminate this Agreement at any time. It is further understood that the Committee may terminate this agreement at any time with 30 days notice. In the case of termination, payment shall be based on the support provided up to the date of termination. If this Agreement is terminated without notice or with less than 30 days notice, payment shall include an amount equal to the rental cost of the equipment for 30 days minus the number of days between termination and the notice of termination.

The Senate accepts no liability for loss or damage to equipment until installed and operational.

Any disagreements between the Contractor and the Senator which cannot be resolved by negotiation shall be presented to the Committee and Contractor for resolution. The decision of the Committee and Contractor shall be final and conclusive.

The Contractor further agrees and warrants that it:

1. Has not employed any person to solicit or obtain this Agreement for any commission, percentage, brokerage, contingent fee, except for bona fide employees maintained by the contractor for the purpose of securing business;

2. Will save the Government harmless from liability ~~in contract performance~~ if such liability results solely from contractor negligence;

3. Will release no information obtained in carrying out the provisions of the contract without prior consent of the Committee;

4. Will not subcontract or assign elsewhere any of the work or service involved without prior consent of the contracting Committee; and

5. Will not discriminate in its performance of this Agreement because of race, color, religion, national origin, sex, age, or state of physical handicap, and shall comply with all laws appertaining to the compensation of labor.

6. Has no conflict of interest, direct or indirect, financial or otherwise, which would be applicable to the performance obligations covered by this agreement.

No Member or Delegate to Congress, or Resident Commissioner, shall be admitted to any share or part of this contract or to any benefit that may arise therefrom.

The contract prices, terms and conditions agreed to herein is limited to the two systems being rented for Senators Warner and Huddleston.

Contractor	Committee on Rules and Administration
H.S. Holzman Vice President Wang Laboratories, Inc.	Chairman
	Wendell H. Ford Ranking Minority Member

UNITED STATES SENATE

AGREEMENT

This agreement is entered into this 10th day of March, 1983, between Senator WALTER HUDDLESTON, (the Senator), and WANG LABORATORIES, INC, (Contractor).

I. GENERAL DESCRIPTION.

This is an agreement for a test of office automation in the Office of the Senator, intended to define the work under a contract between Contractor and the United States Senate. There shall be no liability on the part of the Senate or the Contractor until this agreement is incorporated in a contract between the Contractor and the Senate.

II. APPLICATIONS TO BE SUPPORTED.

Contractor agrees to supply office automation hardware, software, training, and maintenance in support of the activities in the Senator's office described in Attachment A.

III. TRAINING.

Contractor agrees to train staff members or their replacements employed by the Senator to the extent necessary for the use of office automation for the applications designated in Part II. The Senator agrees that the designated persons will be made available for training. Training may be at the office of Contractor or the Senator. The persons initially to be trained (including supervisors) are set forth in Attachment B. Training will be provided for as stated in attachment D. For each person to be trained there is also set forth the application or applications for which the person will be trained, and the schedule for training.

IV. EQUIPMENT AND SOFTWARE.

Contractor will supply and install the equipment and software set forth in Attachment C. For each terminal to be supplied there is also set forth the application or applications for which it will be used.

Contractor agrees to install upgrades and enhancements of hardware and software used in this test as it becomes available in Contractor's standard offerings to the General Services Administration or to the commercial market. The Senator may refuse or defer such upgrades and enhancements if their installation might impede the work of the office or reduce the usefulness of the test.

V. CONTRACTOR SUPPORT.

Contractor will maintain hardware and software in operating condition in accordance with attachment L. Contractor agrees to accept service calls between the hours of 8 a.m. and 5 p.m., 5 days per week. Procedures will be followed in accordance with attachment E. Service calls will be placed by the Senator to the Educational Services and Support Section of the Senate Computer Center (ESS), which will in turn notify the Contractor. During the hours when ESS is not manned, the Senator will call the Contractor directly and notify ESS of the call at the earliest opportunity.

VI. CONTINUATION OF SUPPORT.

Contractor will leave the hardware, software, and any supporting materials in the Office of the Senator for two years at no increase in price, and will provide support during such two-year period on the same terms specified in Part V.

VII. CANCELLATION BY SENATOR.

The Senator may request the Committee to terminate this Agreement with 30 day notification to the Contractor.

VII. NON-DISCLOSURE OF INFORMATION.

Contractor will release no information obtained in carrying out the provisions of this agreement without the prior written consent of the Senator.

IX. PRECEDENCE.

If there is any inconsistency between this agreement and the contract between Contractor and the Senate, the provisions of the latter will govern.

For Contractor

Senator Walter Huddleston

H.S. Holzman
Vice President
Wang Laboratories, Inc.

ATTACHMENT A

Functions	Software
1. Ad-hoc letters	Word processing
2. Floor statements	Word processing
3. Press releases	Word processing
4. Report and memos	Word processing
5. Voucher preparation	Word processing
6. Office expense budgeting and tracking (Not accounting)	Spread sheet
7. Office expense accounting	Accounting
8. Preparation of Senator's annual financial disclosure report	Accounting
9. Personnel histories	Record processing
10. Scheduling	
A. Official Senate schedule	Record processing
b. Washington/Home State schedule	Record processing
c. Personal and family schedule	Record processing
11. Washington/Home State (Intra-Senator) Communications	Electronic mail
12. Communicate with retrieval systems, mail file, and index systems.	Communications

0002a

Attachment B-2

January 13, 1983

OFFICE: Senator Walter Huddleston

Functions	Designated users
1. Ad-hoc letters (Claire Alagia, Henry Sample, Pam Kueber, Mike Sandifer, Don Hellman)	5 persons
2. Floor statements & Speeches (Gary Auxier, Lynn McReynolds)	2 persons
3. Press releases (Gary Auxier, Lynn McReynolds)	2 persons
4. Report and memos (Same as #1)	5 persons
5. Voucher preparation (Pam Kueber)	1 person
6. Office expense budgeting and tracking (Not Accounting) (Pam Gell)	1 person
7. Office expense accounting (Pam Gell)	1 person
8. Preparation of Senator's annual financial disclosure report	----
9. Personnel histories (Pam Gell)	1 person
10. Scheduling	
a. Official Senate schedule	To Be Mutually Agreed
b. Washington/Home State schedule	To Be Mutually Agreed
c. Personal and family schedule	To Be Mutually Agreed
11. Washington/Home State (Intra-Senator) Communications (Pat Price, Louisville)	1 person
12. Communicate with retrieval systems, mail file, and index systems (Kathy Haar)	1 person

ATTACHMENT C

Below is a listing of the prices for the configuration of equipment to be installed in Sen. Huddleston's office.

MODEL	DESCRIPTION	QUANTITY	UNIT MONTHLY RENTAL PRICE	MONTHLY TOTAL PRICE
6515-2	OIS 115-2 Master 8.4 Mb Disk and Single Diskette	1	528	528
TC5536-3	48K Telecommunicating CRT/ Keyboard Workstation	1	253	253
5536-3	48K CRT/Keyboard Workstation	4	191	764
6581W	35 cps Daisy Output Printer	1	248	248
SO-8	List Processing for OIS	1	41	41
TSF-31	Twin Sheet Feeder for 6581W	1	83	83
EF-1	Envelope Feeder for 6481W	1	83	83
	Total Monthly Rental Per System			2,000.00

0002a

ATTACHMENT D

Wang Laboratories will provide System Administrators Training (3 day course) for two people (one person per system) at our Rosslyn office.

Wang Laboratories will provide additional training for up to 12 people (6 People per system) at our Rosslyn office. Two training courses for up to 6 people each will be conducted for five--1/2 day sessions with the following course outline:

Day 1 - Day 3	Intro to WP Training
Day 4	Glossary Training
Day 5	Math/List Processing Training and Consultation

Training courses will be conducted concurrent with the installation of equipment.

Wang Laboratories will provide Self-Paced Training Materials and Training Class Handouts for Replacement Operator Training.

ATTACHMENT E

I. INVOICES AND PAYMENTS

1. Wang shall render invoices (5 copies) for basic monthly charges in the month following the month for which the charges accrue and are payable when billed. Invoices shall provide as a minimum: (a) Type and description of equipment; (b) Serial number; (c) Basic monthly charge for each machine and feature; (d) Total Charges; and (e) Prompt Discount.

II. MAINTENANCE OF EQUIPMENT

A. Wang shall keep the equipment in good operating condition and, subject to security regulations, the Government shall provide Wang access to the equipment to perform maintenance service.

B. Preventive Maintenance. The time required to perform preventive maintenance will not exceed an average of two hours per month per component. Maintenance will be performed during the Principal Period of Maintenance unless mutually agreed otherwise. Wang shall also specify in writing the frequency and duration of the preventive maintenance required for the equipment listed on the order and the Government shall specify the schedule for the performance of the preventive maintenance. This schedule may be modified by mutual agreement.

C. Service Calls. For "On-Call" service, Wang's maintenance personnel shall arrive at the Government's installation site, if located within fifty (50) miles of a Wang Service Center, within four (4) working hours (Principal Period of Maintenance). Beyond fifty (50) miles, two (2) hours of response time shall be added for each twenty-five (25) miles of distance from a Wang Service Center.

D. Replacement Parts. There shall be no additional charges for replacement parts.

E. Maintenance Facilities. The Government shall provide adequate storage space for spare parts and adequate working space including heat, light, ventilation, electric current and outlets for the use of Wang's maintenance personnel. These facilities shall be within a reasonable distance of the equipment to be serviced and shall be provided at no charge to Wang.

F. There shall be no additional maintenance charges for:

(a) Preventive maintenance, regardless of when performed.

(b) Remedial maintenance which was begun during the Principal Period of Maintenance or extension thereof, or when Wang was notified during the Principal Period of Maintenance or extension thereof of the need for remedial maintenance.

(c) Remedial maintenance required within forty-eight (48) hour period due to a recurrence of the same malfunction.

(d) Time spent by maintenance personnel after arrival at the site awaiting the arrival of additional maintenance personnel and/or delivery of parts, etc., after a service call has commenced.

G. MAINTENANCE CHARGES

The basic maintenance applies to equipment located within one hundred (100) miles of the nearest Wang Service Center and forty (40) hours of eight hour shifts (8:00 a.m. to 5:00 p.m., Monday through Friday except Wang designated holidays).

GORDON J. HUMPHREY
NEW HAMPSHIRE

[illegible] Hart Senate Office Building
(202) [illegible]

New Hampshire Toll Free Number
1-800-[illegible]-2714

United States Senate
WASHINGTON, D.C. 20510

COMMITTEES
ARMED SERVICES
Chairman, Subcommittee on Preparedness

ENVIRONMENT AND PUBLIC WORKS

LABOR AND HUMAN RESOURCES
Chairman, Subcommittee on Alcoholism and Drug Abuse

March 23, 1983

The Honorable Charles McC. Mathias, Jr.
Chairman
Senate Committee on Rules and Administration
305 Russell Senate Office Building

Attn: John Swearingen

Dear Mac,

I am writing with regard to a situation which has recently developed. Digital Equipment Corporation of Maynard, Massachusetts wishes to incorporate and have utilized in the office of a U.S. Senator, its computer system known as the "All-In-1" system. The purpose of this enterprise is to test and evaluate the performance of this particular system in the federal legislative branch. The system would be available as a loan only, with no compensation paid therefor.

It was my understanding that clear precedent existed which would permit this type of an arrangement. With this in mind, I took the liberty to write the Senate Ethics Committee, who have confirmed my belief. Please find enclosed a copy of their response to my inquiry.

If possible, I would like very much to proceed as soon as possible with plans to implement such a proposal. I would very much appreciate the Committees' opinion with regard to the permissibility of my Senate offices entering into such an agreement with Digital Equipment Corporation.

Your prompt consideration of my inquiry would be greatly appreciated.

With warm regards, I am

Sincerely yours,

Gordon

Gordon J. Humphrey, USS

GJH/dgc

One Pillsbury Street
Concord, New Hampshire 03301
(603) [illegible]

Federal Building, Room 730
275 Chestnut Street
Manchester, New Ham
(603) [illegible]

Federal Building, Room [illegible]
80 Daniel Street
Portsmouth, New Hampshire 03801
(603) [illegible]

157 Main Street
Berlin, New Hampshire 03570
(603) [illegible]

TED STEVENS, ALASKA, CHAIRMAN
HOWELL HEFLIN, ALA., VICE CHAIRMAN
JESSE HELMS, N.C. DAVID PRYOR, ARK.
DAVE DURENBERGER, MINN. THOMAS F. EAGLETON, MO.
E. GRAYSON VALENTINE, JR., STAFF DIRECTOR
BONNIE S. PARKER, CHIEF CLERK

United States Senate

SELECT COMMITTEE ON ETHICS

113 CARROLL ARMS
FIRST AND C STREETS N.E.
TELEPHONE 224-2981
WASHINGTON, D.C. 20510

RECEIVED
[illegible] MAR 22 [illegible]

March 21, 1983

The Honorable Gordon J. Humphrey
United States Senate
Washington, D.C. 20510

Dear Senator Humphrey:

This is in response to your letter of March 4, 1983 with respect to your proposed trial use of a computer system provided by the Digital Equipment Corporation of Maynard, Massachusetts. We understand that your purpose is to test and evaluate the system's ability to handle data processing tasks in a Member's office, and that the Corporation has offered the system to you as a loan, at no cost to you.

In at least six instances since 1977, this Committee has approved variations of arrangements such as this for other Members, including participation of staff persons in the requisite training courses.

Each ruling has been confined to the question whether any provision of the Code of Official Conduct would impinge in any way upon the arrangement, and has been made subject to the approval of the Committee on Rules and Administration. In that connection, we understand from your staff that they will share their evaluation of the system with staff of the Rules Committee, and we understand from Rules Committee staff that they are interested in receiving those results as part of their evaluation of possible equipment for the Senate.

Given these clear precedents, holding that no provision of the Code of Official Conduct would preclude what you contemplate, the Chairman and Vice Chairman of this Committee have authorized me to respond in their behalf.

Sincerely yours,

Bonnie S. Parker

Bonnie S. Parker
Chief Clerk

cc: Hon. Ted Stevens
Hon. Howell Heflin

UNITED STATES SENATE

CONTRACT

This contract is made and entered into this 28th day of January, 1983, between the United States Senate (the SENATE), by the Committee on Rules and Administration of the SENATE (the COMMITTEE), and Honeywell Information Systems, Inc. (the CONTRACTOR).

It is hereby agreed that the SENATE retains the CONTRACTOR to render the following specialized services, under the supervision of the COMMITTEE.

> A test of Office Automation in the office of Senator Kennedy as set forth in the attached agreement between the Senator and the CONTRACTOR which agreement is incorporated in and is made part of this Contract.

For the services to be provided under this agreement, the CONTRACTOR will be paid a sum not to exceed $2000 per month per office for each month that such services are provided up to a total of 24 months. Such reimbursement to the CONTRACTOR shall be paid monthly from funds available in the appropriations for "Miscellaneous Items" in The Contingent Fund of the SENATE upon vouchers approved by the Chairman of the Committee and upon receipt of statements from the CONTRACTOR and a certification from the Senator that the services were received.

It is understood that the Senator may request the COMMITTEE to terminate this Agreement at any time. It is further understood that the COMMITTEE may terminate this agreement at any time with 30 days notice. In the case of termination, payment shall be based on the support provided up to the effective date of termination. If this agreement is terminated without notice or with less than 30 days notice, payment shall include an amount equal to the rental cost of the equipment for 30 days minus the number of days between termination and notice of termination.

The SENATE acepts no liability for loss or damage to equipment until installed and operational.

The CONTRACTOR further agrees and warrants that it:

1) Has not employed any person to solicit or obtain this agreement for any commission, percentage, brokerage, or contingent fees;

2) Except as expressly set forth in writing in this agreement and except for the implied warranty or merchantability, there are no warranties expressed or implied. In no event will the Contractor be liable to the Government for consequential damages as defined in the Uniform Commercial Code, Section 2-715 in effect in the District of Columbia as of January 1, 1973, i.e.: Consequential damages resulting from the seller's breach include:

(a) Any loss resulting from general or particular requirements and needs of which the seller at the time of contracting has reason to know and which could not reasonably be prevented by cover or otherwise; and

(b) Injury to person or property proximately resulting from any breach of warranty;

3) Will release no information obtained in carrying out the provisions of the contract without prior consent of the COMMITTEE;

4) Will not subcontract or assign elsewhere any of the work or service involved without prior consent of the contracting Committee; and

5) Will not discriminate in its performance of this Agreement because of race, color, religion, national origin, sex, age, or state of physical handicap, and shall comply with all laws appertaining to the compensation of labor.

6) Has no conflict of interest, direct or indirect, financial or otherwise, which would be applicable to the performance obligations covered by this agreement.

No Member or Delegate to Congress, or Resident Commissioner, shall be admitted to any share or part of this contract or to any benefit that may arise therefrom.

Contractor

Committee on Rules
and Administration

Chairman

Wendell H. Ford
Ranking Minority Member

UNITED STATES SENATE

AGREEMENT

This agreement is entered into this 28th day of January, 1983, between Senator Edward M. Kennedy, (the Senator), and Honeywell Information Systems, (Contractor).

I. GENERAL DESCRIPTION

This is an agreement for a test of office automation in the Office of the Senator, intended to define the work under a contract between Contractor and the United States Senate. There shall be no liability on the part of the Senate or the Contractor until this agreement is incorporated in a contract between the Contractor and the Senate.

II. APPLICATIONS TO BE SUPPORTED

Contractor agrees to supply office automation hardware, software, training, and maintenance in support of the activities in the Senator's office described in Attachment A.

III. TRAINING

Contractor agrees to train staff members or their replacements employed by the Senator to the extent necessary for the use of office automation for the applications designated in Part II. The Senator agrees that the designated persons will be made available for training. Training may be at the office of Contractor or the Senator. The persons to be trained (including supervisors) and the specific nature of the training to be furnished are set forth in Attachment B. For each person to be trained, there is also set forth the application or applications for which the person will be trained, and the schedule for training.

IV. EQUIPMENT AND SOFTWARE

Contractor will supply and install the equipment and software set forth in Attachment C. For each terminal to be supplied there is also set forth the application or applications for which it will be used.

Contractor agrees to install upgrades and enhancements of hardware and software used in this test as it becomes available in Contractor's standard offerings to the General Services Administration or to the commercial market. The Senator may refuse or defer such upgrades and enhancements if their installation might impede the work of the office or reduce the usefulness of the test.

V. CONTRACTOR SUPPORT

Contractor will lease/maintain hardware and license software in accordance with the terms and conditions of the attached FY83 Honeywell Authorized ADP Schedule, Office Automation Systems Section, Special Item 132-1 and Special Item 132-20 respectively. The Principal Period of Maintenance (PPM) is 8 a.m. - 6 p.m., five days a week. Response time is next half working day, Principal Period of Maintenance within 30 miles of a Honeywell Service Center.

VI CONTINUATION OF SUPPORT

Contractor will leave the hardware, software, and any supporting materials in the Office of the Senator for two years at no increase in price, and will provide maintenance support during such two-year period on the same terms specified in Part V.

VII. CANCELLATION BY SENATOR

The Senator may request the Committee to terminate this Agreement at any time.

VIII. NON-DISCLOSURE OF INFORMATION

Contractor will release no information obtained in carrying out the provisions of this agreement without the prior written consent of the Senator.

IX. PRECEDENCE

If there is any inconsistency between this agreement and the contract between Contractor and the Senate, the provisions of the latter will govern.

For Contractor

Edward M Kennedy
Senator

UNITED STATES SENATE

ATTACHMENT A

Office of Senator Kennedy

Activities (Functions) to be supported:

1. Ad-hoc letters
2. Floor statements
3. Press releases
4. Reports and memos
5. Voucher preparation
6. Office expense budgeting and tracking (not accounting)
7. Personnel history
8. Scheduling (calendar - daily, weekly, monthly)

UNITED STATES SENATE

ATTACHMENT B

Office of Senator Kennedy

Trainees

1. Chris Doherty
2. Constance Lambert
3. Terry Hitchins
4. Elizabeth Goss
5. Sandra Walker
6. Barbara Cobb

Training Schedule

Training dates will be coordinated with installation of equipment so that classroom instruction will occur after delivery of hardware. Specific dates will be arranged at the mutual agreement of both parties.

Training Description

Honeywell will train six (6) persons in training classes to be held at our local training facility. Classroom instruction will total seven (7) days, but will not be taught in a seven day consecutive period. All trainees will be instructed on all functionalities of the OAS software which includes: Word Processing, File Management, Electronic Mail, Calculator, Records Processing, Calendar, Infocalc, and System Administration. Daily support will be available through our Technical Assistance Center via an 800 number between the hours of 8 a.m. - 6 p.m., Monday through Friday. Continuing on-site support will be provided on an as needed basis at no extra charge for up to, but not more than, ninety (90) days after the installation of the system in Senator Kennedy's office. After that time, per call additional on-site support or follow-up support is available at charges ranging from $59 per hour to $139 per hour, depending on the complexity of the situation. Additional training center classes are available at the published rates and are available upon request.

UNITED STATES SENATE

ATTACHMENT C

HARDWARE

QTY	MODEL	DESCRIPTION	UNIT PURCHASE	EXTENDED PURCHASE
1	CPX9834	DPS6/34 SUBSYS. (INCL 80MB CMD)	$30,000	$30,000
1	CMM9631	256KB MEM EXP.	4,500	4,500
2	PRU7007	35 CPS LQP	3,200	6,400
4	VIP7303	KEYBD TERMINAL	1,900	7,600
2	CBL9611	CBL 25 FT.	80	160
2	VCW1701	1 FT. W17 CABLE	26	52
1	DCM9601	2 ASYNC RS232C	1,000	1,000
1	DCM9637	2 RS422 PORTS	1,000	1,000
1	DCF9603	DUAL D.C. PORTS	1,500	1,500
1	PRF1005	DUAL TRAY SHEET FEEDER	1,800	1,800
1	PRF0006	ADAPTOR PLATE	200	200
				$54,212

1) With 25 ft. cable, is preconfigured at 50 ft.
2) With 25 ft. cable, may be configured w/cable to 4000 ft. at additional cost.

TOTAL MONTHLY CHARGE $2,000

SOFTWARE

QTY	MODEL	DESCRIPTION
1	SHS121V	GCOS 6 MOD 400, REV. 2.1
1	AHP140V MOD 400	OAS FACILITY UNDER
1	AHP142V	INFOCALC

*Specific terminal applications to be determined by System Administrator as workload dictates. Each terminal has full OAS functionality and can support all applications (functions).

UNITES STATES SENATE

SPECIAL PRICING CONSIDERATIONS

Purchase discount applicable only to initial purchase of hardware.

Forty-six percent (46%) purchase option credits of total monthly charge to be accrued during the first twelve (12) month period only.

Pricing terms applicable only for a twenty-four (24) month period.

Pricing terms applicable only to two (2) "pilot" systems.

United States Senate

CONTRACT

This contract is made and entered into this _______ day of March, 19 83, between the United States Senate (the Senate), by the Committee on Rules and Administration of the Senate (the Committee), and Xerox Corporation (the Contractor).

It is hereby agreed that the Senate retains the Contractor to render the following specialized services, under the supervision of the Committee:

> A test of office automation in the office of Senator Mack Mattingly as set forth in the attached agreement between the Senator and the Contractor which agreement is incorporated in and is made part of this contract.

For the services to be provided under this agreement, the Contractor will be paid a sum not to exceed $ 2000.00 per month for each month that such services are provided up to a total of 24 months, subject to the availability of appropriated funds. Such reimbursement to the Contractor shall be paid monthly from funds available in the appropriations for "Miscellaneous Items" in the contingent fund of the Senate upon vouchers approved by the Chairman of the Committee and upon receipt of statements from the Contractor with supporting data and a certification from the Senator that the services were received. The judgment of the Committee on Rules and Administration shall be final and conclusive with respect to the validity of claims for reimbursement of such expenses.

It is understood that the Senator may request the Committee to terminate this Agreement at any time. It is further understood that the Committee may terminate this agreement at any time with 30 days notice. In the case of termination, payment shall be based on the support provided up to the date of termination. If this Agreement is terminated without notice or with less than 30 days notice, payment shall include an amount equal to the rental cost of the equipment for 30 days minus the number of days between termination and the notice of termination.

The Senate accepts no liability for loss or damage to equipment until installed and operational.

Any disagreements between the Contractor and the Senator which cannot be resolved by negotiation shall be presented to the Committee for resolution. The decision of the Committee shall be final and conclusive.

The Contractor further agrees and warrants that it:

1. Has not employed any person to solicit or obtain this Agreement for any commission, percentage, brokerage or contingent fee;

2. Will save the Government harmless from liability in performance;

3. Will release no information obtained in carrying out the provisions of the contract without prior consent of the Committee;

4. Will not subcontract or assign elsewhere any of the work or service involved without prior consent of the contracting Committee; and

5. Will not discriminate in its performance of this Agreement because of race, color, religion, national origin, sex, age, or state of physical handicap, and shall comply with all laws appertaining to the compensation of labor.

6. Has no conflict of interest, direct or indirect, financial or otherwise, which would be applicable to the performance obligations covered by this agreement.

No Member or Delegate to Congress, or Resident Commissioner, shall be admitted to any share or part of this contract or to any benefit that may arise therefrom.

Contractor

Information Processing Sales
Manager

Committee on Rules
and Administration

Chairman

Wendell H. Ford
Ranking Minority Member

United States Senate

AGREEMENT

This agreement is entered into this 7th day of March, 19 83, between Senator Mack Mattingly, (the Senator), and Xerox Corporation, (Contractor)

I. GENERAL DESCRIPTION.

This is an agreement for a test of office automation in the Office of the Senator, intended to define the work under a contract between Contractor and the United States Senate. There shall be no liability on the part of the Senate or the Contractor until this agreement is incorporated in a contract between the Contractor and the Senate.

II. APPLICATIONS TO BE SUPPORTED.

Contractor agrees to supply office automation hardware, software, training, and maintenance in support of the activities in the Senator's office described in Attachment A.

III. TRAINING.

Contractor agrees to train staff members or their replacements employed by the Senator to the extent necessary for the use of office automation for the applications designated in Part II. The Senator agrees that the designated persons will be made available for training. Training may be at the office of Contractor or the Senator. The persons initially to be trained (including supervisors) are set forth in Attachment B. For each person to be trained there is also set forth the application or applications for which the person will be trained, and the schedule for training.

IV. EQUIPMENT AND SOFTWARE.

Contractor will supply and install the equipment and software set forth in Attachment C. For each terminal to be supplied there is also set forth the application or applications for which it will be used.

Contractor agrees to install upgrades and enhancements of hardware and software used in this test as it becomes available in Contractor's standard offerings to the General Services

Administration or to the commercial market. The Senator may refuse or defer such upgrades and enhancements if their installation might impede the work of the office or reduce the usefulness of the test.

V. CONTRACTOR SUPPORT.

Contractor will maintain hardware and software in operating condition satisfactory to the Senator. Contractor agrees to accept service calls between the hours of 8:00 am and 6:00 pm, 5 days a week, and, when on-site maintenance is required, Contractor agrees to have a service technician capable of solving the problem at the site of the problem within 6 hours after receipt of the call. Service calls will be placed by the Senator to the Educational Services and Support Section of the Senate Computer Center (ESS), which will in turn notify the Contractor. During the hours when ESS is not manned, the Senator will call the Contractor directly and notify ESS of the call at the earliest opportunity.

VI. CONTINUATION OF SUPPORT.

Contractor will leave the hardware, software, and any supporting materials in the Office of the Senator for two years at no increase in price, and will provide support during such two-year period on the same terms specified in Part V.

VII. CANCELLATION BY SENATOR

The Senator may request the Committee to terminate this Agreement at any time.

VIII. NON-DISCLOSURE OF INFORMATION

Contractor will release no information obtained in carrying out the provisions of this agreement without the prior written consent of the Senator.

IX. PRECEDENCE.

If there is any inconsistency between this agreement and the contract between Contractor and the Senate, the provisions of the latter will govern.

For Contractor
Information Processing
Sales Manager

Senator

ATTACHMENT A

XEROX

APPLICATIONS TO BE SUPPORTED:

The primary application shall be word processing. Currently, the preparation of speeches, press releases, floor statements, ad-hoc letters and certain correspondence is done manually or on CMS. The 860 Information Processing System and the 820-II Personal Computer with their respective word processing software will simplify traditional text entry and editing functions. Upward compatibility between the two systems and the word processing software is provided through the 820/860 Conversion Utility. Thus documentation initially input at an 820-II could be easily edited, revised, and formatted for final output at either the 820-II or 860 IPS.

Another application identified includes office expense accounting and budgeting. The 820-II with SUPERCALC will automate these computing tasks that currently are very time consuming and tedious. SUPERCALC is an electronic worksheet for testing sets of variables needed to create budgets, spread sheets, statistical reports, forecasting and analysis.

Additionally, the ability to illustrate this statistical information graphically will be provided through the Business Graphics software package. Currently there is no easy method of creating graphic illustrations. As a result, they are not used or incorporated within documentatiton. The Business Graphics software will enable the office to automatically create charts and graphs.

The TTY Communications software will enable the office to expand the use of their 820-II by allowing them to tie into databases and services such as CMS, LEGIS, and SCORPIO, etc. They will have the the capability of accessing pertinent information from a variety of sources. The TTY software will allow the 820-II to function in a dumb terminal mode or as an intelligent terminal where information can be edited, processed, and changed before being sent. Additionally, received data can be reviewed as is, integrated into locally prepared text, or modified. (Modems will be provided by the Senate).

ATTACHMENT B

TRAINING:

Training for the following individuals, their applications and the systems on which they will be trained is as follows:

NAME	SYSTEM	APPLICATION
Robert Atchison, Administrative Assistant	820-II	Word Processing SuperCalc Business Graphics
Richard Moore, Press Secretary	820-II	Word Processing
Norma Haisten, Press Assistant	820-II	Word Processing
Dick Ribbentrop, Legislative Assistant	820-II	Word Processing TTY
Peggy Ingraham, Legislative Assistant	820-II	Word Processing TTY
Paul Brown, Assistant Press Secretary	860 IPS, Full Page 820-II	Word Processing Spell-Chek Word Processing TTY

ATTACHMENT B (cont.)

820-II TRAINING:

The training for all 820-II applications will be on-site at the respective Senator's office. A conference room or similar facility will be provided in order to set up at least three (3) 820-II's to begin initial training on the primary application of word processing. There will be three (3) half-day training sessions for word processing.

Training for SuperCalc, Business Graphics, and TTY will be handled on an individual basis with the person assigned to that particular application. Each of these applications will involve a half day training session.

860 IPS TRAINING:

There are two options that the Senate has with regard to 860 IPS training. For each 860 IPS system, the Senate can send two (2) operators for a half day orientation seminar at the Xerox facility in Rosslyn. If this is not convenient, orientation training will be on-site in the respective Senator's office. Orientation training will cover basic word processing techniques--document creation, editting, printing, revising, etc. Following the orientation training there will be on-site training that will cover advanced editting, formatting, repetitive letters, Spell-Chek (spelling dictionary and verification package), and use of the 820/860 Conversion Utility.

ATTACHMENT C
(Senator Mattingly)

EQUIPMENT & SOFTWARE CONFIGURATION

XEROX

	SYSTEM	APPLICATION(S)
1.	820-II 40 CPS Printer Tractor Feed	Word Processing SuperCalc Business Graphics
2.	820-II 40 CPS Printer Tractor Feed	Word Processing
3.	820-II	Word Processing
4.	820-II 40 CPS Printer Tractor Feed	Word Processing TTY
5.	820-II 40 CPS Printer Tractor Feed	Word Processing TTY
6.	860 IPS - Full Page 40 CPS Printer Automatic Paper Feeder	Word Processing, Spell-Chek 820/860 Conversion Utility

XEROX

PRICING

Prices for the 860 IPS are taken from the GSA Contract No. GS-OOC-03423.
Rental prices include service on the equipment.

860 FULL PAGE SYSTEM:

Product Code	Component	Monthly Rental	Placement/Removal Charges
968	Standard Controller	$ 130.95	$55/55
967	Full Page Display	$ 155.20	$20/20
998	Keyboard with CAT	$ 77.60	$20/20
190	Single Sided Disc Drive (2)	$ 58.20	none
249	128K Memory	$ 77.60	none
324	40 CPS Printer	$ 111.55	$40/40
568	Automatic Paper Feeder	$ 58.20	$40/40
250	Word Processing Software	none	none
TOTAL		$669.30	

820-II PERSONAL COMPUTER:

The 820-II Personal Computer is not available for rental on the current GSA Contract. Special pricing for purposes of this Senate office automation pilot have been determined. Component pricing for the 820-II will be as follows:

U03, 928	Display/Processor, Keyboard, 8" Single-sided, double density disc drives	$ 155.23
D80	40 CPS Printer	$ 115.00
TOTAL		$ 270.23

United States Senate

CONTRACT

This contract is made and entered into this _______ day of March, 1983, between the United States Senate (the Senate), by the Committee on Rules and Administration of the Senate (the Committee), and Digital Equipment Corporation (the Contractor).

It is hereby agreed that the Senate retains the Contractor to render the following specialized services, under the supervision of the Committee:

> A test of office automation in the office of Senator James McClure as set forth in the attached agreement between the Senator and the Contractor which agreement is incorporated in and is made part of this contract.

For the services to be provided under this agreement, the Contractor will be paid a sum not to exceed $ 2,000. per month for each month that such services are provided up to a total of 24 months, subject to the availability of appropriated funds. Such reimbursement to the Contractor shall be paid monthly from funds available in the appropriations for "Miscellaneous Items" in the contingent fund of the Senate upon vouchers approved by the Chairman of the Committee and upon receipt of statements from the Contractor with supporting data and a certification from the Senator that the services were received. The judgment of the Committee on Rules and Administration shall be final and conclusive with respect to the validity of claims for reimbursement of such expenses.

It is understood that the Senator may request the Committee to terminate this Agreement at any time. It is further understood that the Committee may terminate this agreement at any time with 30 days notice. In the case of termination, payment shall be based on the support provided up to the date of termination. If this Agreement is terminated without notice or with less than 30 days notice, payment shall include an amount equal to the rental cost of the equipment for 30 days minus the number of days between termination and the notice of termination.

The Senate accepts no liability for loss or damage to equipment until installed and operational.

Any disagreements between the Contractor and the Senator which cannot be resolved by negotiation shall be presented to the Committee for resolution. The decision of the Committee shall be final and conclusive.

The Contractor further agrees and warrants that it:

1. Has not employed any person to solicit or obtain this Agreement for any commission, percentage, brokerage or contingent fee;

2. Will save the Government harmless from liability in performance;

3. Will release no information obtained in carrying out the provisions of the contract without prior consent of the Committee;

4. Will not subcontract or assign elsewhere any of the work or service involved without prior consent of the contracting Committee; and

5. Will not discriminate in its performance of this Agreement because of race, color, religion, national origin, sex, age, or state of physical handicap, and shall comply with all laws appertaining to the compensation of labor.

6. Has no conflict of interest, direct or indirect, financial or otherwise, which would be applicable to the performance obligations covered by this agreement.

No Member or Delegate to Congress, or Resident Commissioner, shall be admitted to any share or part of this contract or to any benefit that may arise therefrom.

Contractor

Robt T. Emerson
Robert Emerson
Contracts Manager

Committee on Rules
and Administration

C. McC. Mathias
Chairman

Wendell H. Ford
Ranking Minority Member

United States Senate

AGREEMENT

This agreement is entered into this 1 day of MARCH, 1983, between Senator JAMES A. McCLURE, (the Senator), and DIGITAL EQUIPMENT CORP., (Contractor)

I. GENERAL DESCRIPTION.

This is an agreement for a test of office automation in the Office of the Senator, intended to define the work under a contract between Contractor and the United States Senate. There shall be no liability on the part of the Senate or the Contractor until this agreement is incorporated in a contract between the Contractor and the Senate.

II. APPLICATIONS TO BE SUPPORTED.

Contractor agrees to supply office automation hardware, software, training, and maintenance in support of the activities in the Senator's office described in Attachment A.

III. TRAINING.

Contractor agrees to train staff members or their replacements employed by the Senator to the extent necessary for the use of office automation for the applications designated in Part II. The Senator agrees that the designated persons will be made available for training. Training may be at the office of Contractor or the Senator. The persons initially to be trained (including supervisors) are set forth in Attachment B. For each person to be trained there is also set forth the application or applications for which the person will be trained, and the schedule for training.

IV. EQUIPMENT AND SOFTWARE.

Contractor will supply and install the equipment and software set forth in Attachment C. For each terminal to be supplied there is also set forth the application or applications for which it will be used.

Contractor agrees to install upgrades and enhancements of hardware and software used in this test as it becomes available in Contractor's standard offerings to the General Services

Administration or to the commercial market. The Senator may refuse or defer such upgrades and enhancements if their installation might impede the work of the office or reduce the usefulness of the test.

V. CONTRACTOR SUPPORT.

Contractor will maintain hardware and software in operating condition satisfactory to the Senator. Contractor agrees to accept service calls between the hours of 9AM and 6PM, 5 days a week, and, when on-site maintenance is required, Contractor agrees to have a service technician capable of solving the problem at the site of the problem within 4 hours after receipt of the call. Service calls will be placed by the Senator to the Educational Services and Support Section of the Senate Computer Center (ESS), which will in turn notify the Contractor. During the hours when ESS is not manned, the Senator will call the Contractor directly and notify ESS of the call at the earliest opportunity.

VI. CONTINUATION OF SUPPORT.

Contractor will leave the hardware, software, and any supporting materials in the Office of the Senator for two years at no increase in price, and will provide support during such two-year period on the same terms specified in Part V.

VII. CANCELLATION BY SENATOR

The Senator may request the Committee to terminate this Agreement at any time.

VIII. NON-DISCLOSURE OF INFORMATION

Contractor will release no information obtained in carrying out the provisions of this agreement without the prior written consent of the Senator.

IX. PRECEDENCE.

If there is any inconsistency between this agreement and the contract between Contractor and the Senate, the provisions of the latter will govern.

James A. McClure

For Contractor

Senator James A. McClure

ATTACHMENT A

1. General word processing, office accounting and executive scheduling.

ATTACHMENT B

Digital will train three (3) staff members outside the office in the Word Processing class at Lanham. Digital will expect to spend another two (2) weeks training the remaining 11 or so people. This will be a self paced course with on site assistance training.

ATTACHMENT C

The following is a list of the equipment and software that Digital will provide for the pilot:

ITEM	QUANTITY	MODEL	DESCRIPTION
1	7	PC278-AA	SYSTEM
2	7	PC2K1-AA	KEYBOARD
3	7	VR201-A	MONITOR
4	7	PC27X-AA	CP/M SOFTCARD
5	1	PC27X-BB	DISK INTERFACE
6	1	RCD50-CA	5MB WINCHESTER
7	2	LA100-2A	DRAFT PRINTER
8	2	LQP02	LETTER QUALITY PRINTER
9	3	LQPX2-SW	("Y" CABLE)
10	7	QF745-A3	ALL W.P. SOFTWARE
11	2	QA064-C3	MULTIPLAN
12	2		EXECUTIVE APPLICATION PACKAGE

Of this total, the following will be in the Boise, Idaho office: 1 each of item 1,2,3,4,8 and10.

United States Senate

CONTRACT

This contract is made and entered into this tenth day of February, 1983, between the United States Senate (the Senate), by the Committee on Rules and Administration of the Senate (the Committee), and the IBM Corporation (the Contractor).

It is hereby agreed that the Senate retains the Contractor to render the following specialized services, under the supervision of the Committee:

> A test of office automation in the office of Senator Stevens as set forth in the attached agreement between the Senator and the Contractor which agreement is incorporated in and is made part of this contract.

For the services to be provided under this agreement, the Contractor will be paid a sum not to exceed $1,994.70 per month for each month that such services are provided up to a total of 24 months, subject to the availability of appropriated funds. Such reimbursement to the Contractor shall be paid monthly from funds available in the appropriations for "Miscellaneous Items" in the contingent fund of the Senate upon vouchers approved by the Chairman of the Committee and upon receipt of statements from the Contractor with supporting data and a certification from the Senator that the services were received. The judgment of the Committee on Rules and Administration shall be final and conclusive with respect to the validity of claims for reimbursement of such expenses.

It is understood that the Senator may request the Committee to terminate this Agreement at any time. It is further understood that the Committee may terminate this agreement at any time with 30 days notice. In the case of termination, payment shall be based on the support provided up to the date of termination. If this Agreement is terminated without notice or with less than 30 days notice, payment shall include an amount equal to the rental cost of the equipment for 30 days minus the number of days between termination and the notice of termination.

The Senate accepts no liability for loss or damage to equipment until installed and operational.

Any disagreements between the Contractor and the Senator which cannot be resolved by negotiation shall be presented to the Committee for resolution. The decision of the Committee shall be final and conclusive.

The Contractor further agrees and warrants that it:

1. Has not employed any person to solicit or obtain this Agreement for any commission, percentage, brokerage or contingent fee;

2. Will save the Government harmless from liability in performance;

3. Will release no information obtained in carrying out the provisions of the contract without prior consent of the Committee;

4. Will not subcontract or assign elsewhere any of the work or service involved without prior consent of the contracting Committee; and

5.. Will not discriminate in its performance of this Agreement because of race, color, religion, national origin, sex, age, or state of physical handicap, and shall comply with all laws appertaining to the compensation of labor.

6. Has no conflict of interest, direct or indirect, financial or otherwise, which would be applicable to the performance obligations covered by this agreement.

No Member or Delegate to Congress, or Resident Commissioner, shall be admitted to any share or part of this contract or to any benefit that may arise therefrom.

Contractor

M. Clark Conlon
Manager of Federal Contracts

IBM Corporation
10401 Fernwood Road
Bethesda, MD 20817

Committee on Rules
and Administration

x C. Mc. Mathias
Chairman

x Wendell H. Ford
Ranking Minority Member

United States Senate

AGREEMENT

This agreement is entered into this tenth day of February, 1983, between Senator Stevens, (the Senator), and the IBM Corporation, (Contractor)

I. GENERAL DESCRIPTION.

This is an agreement for a test of office automation in the Office of the Senator, intended to define the work under a contract between Contractor and the United States Senate. There shall be no liability on the part of the Senate or the Contractor until this agreement is incorporated in a contract between the Contractor and the Senate.

II. APPLICATIONS TO BE SUPPORTED.

Contractor agrees to supply office automation hardware, software, training, and maintenance in support of the activities in the Senator's office described in Attachment A.

III. TRAINING.

Contractor agrees to train staff members or their replacements employed by the Senator to the extent necessary for the use of office automation for the applications designated in Part II. The Senator agrees that the designated persons will be made available for training. Training may be at the office of Contractor or the Senator. The persons initially to be trained (including supervisors) are set forth in Attachment B. For each person to be trained there is also set forth the application or applications for which the person will be trained, and the schedule for training.

IV. EQUIPMENT AND SOFTWARE.

Contractor will supply and install the equipment and software set forth in Attachment C. For each terminal to be supplied there is also set forth the application or applications for which it will be used.

Contractor agrees to install upgrades and enhancements of hardware and software used in this test as it becomes available in Contractor's standard offerings to the General Services

Administration or to the commercial market. The Senator may refuse or defer such upgrades and enhancements if their installation might impede the work of the office or reduce the usefulness of the test.

V. CONTRACTOR SUPPORT.

Contractor will maintain hardware and software in operating condition satisfactory to the Senator. Contractor agrees to accept service calls between the hours of 8:00 a.m. and 5:30 p.m., five days a week, and, when on-site maintenance is required, Contractor agrees to have a service technician capable of solving the problem at the site of the problem within 6 hours after receipt of the call. Service calls will be placed by the Senator to the Educational Services and Support Section of the Senate Computer Center (ESS), which will in turn notify the Contractor. During the hours when ESS is not manned, the Senator will call the Contractor directly and notify ESS of the call at the earliest opportunity.

VI. CONTINUATION OF SUPPORT.

Contractor will leave the hardware, software, and any supporting materials in the Office of the Senator for two years at no increase in price, and will provide support during such two-year period on the same terms specified in Part V.

VII. CANCELLATION BY SENATOR

The Senator may request the Committee to terminate this Agreement at any time.

VIII. NON-DISCLOSURE OF INFORMATION

Contractor will release no information obtained in carrying out the provisions of this agreement without the prior written consent of the Senator.

IX. PRECEDENCE.

If there is any inconsistency between this agreement and the contract between Contractor and the Senate, the provisions of the latter will govern.

For Contractor
M. Clark Conlon
Manager of Federal Contracts
IBM Corporation

Ted Stevens
Senator

AGREEMENT NOTES

1. The following text is added to Paragraph 9. of this Agreement:

> In the event of any inconsistencies between this Agreement and the terms and conditions of the IBM GSA Schedule Contract, this Agreement shall govern. The terms and conditions of the IBM GSA Schedule Contract are incorporated herein by reference.

2. It is understood and agreed by both parties that the normal lease term for the equipment designated is 36 months. This equipment may be terminated prior to the completion of the lease term by the Committee invoking the termination for convenience of the Government clause contained in 41-CFR Section 1-8.705-1 (1982). For the purpose of any such termination, this agreement shall be considered a contract for services.

3. Prices are not subject to change.

A11F1V

ATTACHMENT A

Five wordprocessing stations, two pairs of which share one printer each, and one station with communications feature to drive System Six printer. The latter to perform file maintenance in addition to wordprocessing function.

ATTACHMENT B

Training to be in Senator's office, supported by IBM Office Systems Support Center and by local IBM Systems Engineer, and through attendance at IBM seminars in D.C. area at no additional cost to Senate.

Staff to be trained include: Sandy Bass, Carol White, Ardine Harrison, Florence Castillo, Judy Garrett, Kathy Nicolet and Marie Nash.

ATTACHMENT C

INSTALLATION FOR SENATOR STEVENS

UNIT	MDL/FC	DESCRIPTION	QTY
5218	A02	Printwheel Printer	1
	1200	Auto Paper Handling Prereq	1
	1439502	Prestige Elite Typestyle	1
	2000	6 Meter (19.7 Ft) Cable	1
	7860	Sheet-Feed Paper Handler	1
		WORKSTATION 1 HARDWARE	
6361	001	Mag Card Unit	1
6580	A04	256K Memory for 25 Line Display	1
	3300	25 Line Display	1
	3705	Commo W/Single EIA Ext Inter	1
	5330	96 Character Keyboard	1
	7997	Printer Sharing	1
6360	022	Dual Diskette Unit - 2D	1
		WORKSTATION 2 HARDWARE	
6580	A02	192K Memory for 25 Line Display	1
	3300	25 Line Display	1
	5330	96 Character Keyboard	1
	7992	30 Meter (98.4 Ft) Cable	1
	7997	Printer Sharing	1
6360	011	Dual Diskette Unit - 1	1
5218	A01	Printwheel Printer	1
	1200	Auto Paper Handling Prereq	1
	1439502	Prestige Elite Typestyle	1
	2000	6 Meter (19.7 Ft) Cable	1
	7860	Sheet-Feed Paper Handler	1
		WORKSTATION 3 HARDWARE	
6580	A04	256K Memory for 25 Line Display	1
	3300	25 Line Display	
	5330	96 Character Keyboard	1
	7997	Printer Sharing	1
6360	022	Dual Diskette Unit - 2D	1

UNIT	MDL/FC	DESCRIPTION	QTY
		WORKSTATION 4 HARDWARE	
6580	A02	192K Memory for 25 Line Display	1
	3300	25 Line Display	1
	5330	96 Character Keyboard	1
	7992	30 Meter (98.4 Ft) Cable	1
	7997	Printer Sharing	1
6360	011	Dual Diskette Unit - 1	1
		WORKSTATION 5 HARDWARE	
6580	A04	256K Memory for 25 Line Display	1
	3300	25 Line Display	1
	3705	Commo W/Single EIA Ext Inter	1
	5330	96 Character Keyboard	1
6360	022	Dual Diskette Unit - 2D	1

HARDWARE AND MAINTENANCE COST TABLE FOR 24-MONTH TEST PERIOD

Hardware Configuration	$36,408.00
Maintenance	12,996.00
Destination Charges	369.00
Trade-in Allowance	
IBM Mag Card A Serial No. 9668842	-950.00
IBM Mag Card A Serial No. 0302413	-950.00
TOTAL	47,873.00
Monthly Payment Amount (24 months)	$ 1,994.70

70C46X2R

International Business Machines Corporation

10401 Fernwood Road
Bethesda, Maryland 20034
301/897-2000

May 2, 1983

Committee on Rules and Administration
United States Senate
Washington, DC 20510

Attention: The Honorable Charles McC. Mathias

Dear Senator Mathias:

IBM is pleased to submit the attached changes to the proposed configuration and cost table, Attachment C, for the twenty-four month test, offered on February 10, 1983.

For question regarding the change, please contact Bill Shankland at 301/493-0209.

Very truly yours,

M. Clark Conlon
Manager of Federal Contracts

G4S1R

ATTACHMENT C

INSTALLATION FOR SENATOR STEVENS

UNIT	MDL/FC	DESCRIPTION	QTY
5218	A02	Printwheel Printer	1
	1200	Auto Paper Handling Prereq	1
	1439502	Prestige Elite Typestyle	1
	2000	6 Meter (19.7 Ft) Cable	1
	7860	Sheet-Feed Paper Handler	1
		WORKSTATION 1 HARDWARE	
6361	001	Mag Card Unit	1
6580	A04	256K Memory for 25 Line Display	1
	3300	25 Line Display	1
	5330	96 Character Keyboard	1
	7997	Printer Sharing	1
6360	022	Dual Diskette Unit - 2D	1
		WORKSTATION 2 HARDWARE	
6580	A02	192K Memory for 25 Line Display	1
	3300	25 Line Display	1
	5330	96 Character Keyboard	1
	7992	30 Meter (98.4 Ft) Cable	1
	7997	Printer Sharing	1
6360	011	Dual Diskette Unit - 1	1
5218	A01	Printwheel Printer	1
	1200	Auto Paper Handling Prereq	1
	1439502	Prestige Elite Typestyle	1
	2000	6 Meter (19.7 Ft) Cable	1
	7860	Sheet-Feed Paper Handler	1
		WORKSTATION 3 HARDWARE	
6580	A04	256K Memory for 25 Line Display	1
	3300	25 Line Display	1
	5330	96 Character Keyboard	1
	7997	Printer Sharing	1
6360	022	Dual Diskette Unit - 2D	1

70C46X1R

UNIT	MDL/FC	DESCRIPTION	QTY
		WORKSTATION 4 HARDWARE	
6580	A02	192K Memory for 25 Line Display	1
	3300	25 Line Display	1
	5330	96 Character Keyboard	1
	7992	30 Meter (98.4 Ft) Cable	1
	7997	Printer Sharing	1
6360	011	Dual Diskette Unit - 1	1
		WORKSTATION 5 HARDWARE	
6580	A04	256K Memory for 25 Line Display	1
	3300	25 Line Display	1
	5330	96 Character Keyboard	1
6360	022	Dual Diskette Unit - 2D	1
	3707	Dual EIA Interface for 2 External Modems	1

HARDWARE AND MAINTENANCE COST TABLE FOR 24-MONTH TEST PERIOD

Hardware Configuration	$36,144.00
Maintenance	12,819.00
Destination Charges	369.00
Trade-in Allowance	
IBM Mag Card A Serial No. 9668842	-950.00
IBM Mag Card A Serial No. 0302413	-950.00
TOTAL	47,432.00
Monthly Payment Amount (24 months)	$ 1,976.33

70C46X2R

UNITED STATES SENATE

CONTRACT

This contract is made and entered into this 10th day of March, 1983, between the United States Senate (the Senate), by the Committee on Rules and Administration of the Senate (the Committee), and WANG LABORATORIES, INC, (the Contractor).

It is hereby agreed that the Senate retains the Contractor to render the following specialized services, under the supervision of the Committee:

> A test of office automation in the offices of Senators Warner and Huddleston as set forth in the attached agreement between the Senators and the Contractor which agreement is incorporated in and is made part of this contract.

For the services to be provided under this agreement, the Contractor will be paid a sum not to exceed $ 2,000.00 per month/per system for each month that such services are provided up to a total of 24 months, subject to the availability of appropriated funds. Such reimbursement to the Contractor shall be paid monthly from funds available in the appropriations for "Miscellaneous Items" in the contingent fund of the Senate upon vouchers approved by the Chairman of the Committee and upon receipt of statements from the Contractor with supporting data and a certification from the Senator that the services were received. The judgment of the Committee on Rules and Administrations shall be final and conclusive with respect to the validity of claims for reimbursement of such expenses.

It is understood that the Senator may request the Committee to terminate this Agreement at any time. It is further understood that the Committee may terminate this agreement at any time with 30 days notice. In the case of termination, payment shall be based on the support provided up to the date of termination. If this Agreement is terminated without notice or with less than 30 days notice, payment shall include an amount equal to the rental cost of the equipment for 30 days minus the number of days between termination and the notice of termination.

The Senate accepts no liability for loss or damage to equipment until installed and operational.

Any disagreements between the Contractor and the Senator which cannot be resolved by negotiation shall be presented to the Committee and Contractor for resolution. The decision of the Committee and Contractor shall be final and conclusive.

The Contractor further agrees and warrants that it:

1. Has not employed any person to solicit or obtain this Agreement for any commission, percentage, brokerage, contingent fee, except for bona fide employees maintained by the contractor for the purpose of securing business;

2. Will save the Government harmless from liability ~~in contract performance~~ BD if such liability results solely from contractor negligence;

3. Will release no information obtained in carrying out the provisions of the contract without prior consent of the Committee;

4. Will not subcontract or assign elsewhere any of the work or service involved without prior consent of the contracting Committee; and

5. Will not discriminate in its performance of this Agreement because of race, color, religion, national origin, sex, age, or state of physical handicap, and shall comply with all laws appertaining to the compensation of labor.

6. Has no conflict of interest, direct or indirect, financial or otherwise, which would be applicable to the performance obligations covered by this agreement.

No Member or Delegate to Congress, or Resident Commissioner, shall be admitted to any share or part of this contract or to any benefit that may arise therefrom.

The contract prices, terms and conditions agreed to herein is limited to the two systems being rented for Senators Warner and Huddleston.

Contractor

H.S. Holzman
Vice President
Wang Laboratories, Inc.

Committee on Rules
and Administration

C McC Mathias
Chairman

Wendell H. Ford
Ranking Minority Member

UNITED STATES SENATE

AGREEMENT

This agreement is entered into this 10th day of March, 1983, between Senator JOHN W. WARNER, (the Senator), and WANG LABORATORIES, INC, (Contractor).

I. GENERAL DESCRIPTION.

This is an agreement for a test of office automation in the Office of the Senator, intended to define the work under a contract between Contractor and the United States Senate. There shall be no liability on the part of the Senate or the Contractor until this agreement is incorporated in a contract between the Contractor and the Senate.

II. APPLICATIONS TO BE SUPPORTED.

Contractor agrees to supply office automation hardware, software, training, and maintenance in support of the activities in the Senator's office described in Attachment A.

III. TRAINING.

Contractor agrees to train staff members or their replacements employed by th Senator to the extent necessary for the use of office automation for the applications designated in Part II. The Senator agrees that the designated persons will be made available for training. Training may be at the office o Contractor or the Senator. The persons initially to be trained (including supervisors) are set forth in Attachment B. Training will be provided for as stated in attachment D. For each person to be trained there is also set fort the application or applications for which the person will be trained, and the schedule for training.

IV. EQUIPMENT AND SOFTWARE.

Contractor will supply and install the equipment and software set forth in Attachment C. For each terminal to be supplied there is also set forth the application or applications for which it will be used.

Contractor agrees to install upgrades and enhancements of hardware and software used in this test as it becomes available in Contractor's standard offerings to the General Services Administration or to the commercial market The Senator may refuse or defer such upgrades and enhancements if their installation might impede the work of the office or reduce the usefulness of the test.

V. CONTRACTOR SUPPORT.

Contractor will maintain hardware and software in operating condition in accordance with attachment E. Contractor agrees to accept service calls between the hours of 8 a.m. and 5 p.m., 5 days per week. Procedures will be followed in accordance with attachment E. Service calls will be placed by the Senator to the Educational Services and Support Section of the Senate Computer Center (ESS), which will in turn notify the Contractor. During the hours when ESS is not manned, the Senator will call the Contractor directly and notify ESS of the call at the earliest opportunity.

VI. CONTINUATION OF SUPPORT.

Contractor will leave the hardware, software, and any supporting materials in the Office of the Senator for two years at no increase in price, and will provide support during such two-year period on the same terms specified in Part V.

VII. CANCELLATION BY SENATOR.

The Senator may request the Committee to terminate this Agreement with 30 day notification to the Contractor.

VII. NON-DISCLOSURE OF INFORMATION.

Contractor will release no information obtained in carrying out the provisions of this agreement without the prior written consent of the Senator.

IX. PRECEDENCE.

If there is any inconsistency between this agreement and the contract between Contractor and the Senate, the provisions of the latter will govern.

For Contractor

John W Warner
Senator John W. Warner

H.S. Holzman
Vice President
Wang Laboratories, Inc.

ATTACHMENT A

Functions	Software
1. Ad-hoc letters	Word processing
2. Floor statements	Word processing
3. Press releases	Word processing
4. Report and memos	Word processing
5. Voucher preparation	Word processing
6. Office expense budgeting and tracking (Not accounting)	Spread sheet
7. Office expense accounting	Accounting
8. Preparation of Senator's annual financial disclosure report	Accounting
9. Personnel histories	Record processing
10. Scheduling	
A. Official Senate schedule	Record processing
b. Washington/Home State schedule	Record processing
c. Personal and family schedule	Record processing
11. Washington/Home State (Intra-Senator) Communications	Electronic mail
12. Communicate with retrieval systems, mail file, and index systems.	Communications

0002a

Attachment B-1

January 14, 1983

OFFICE: Senator John W. Warner

Functions	Designated users
1. Ad-hoc letters (McChesney, Rogers Gallo, Eichman, Nasser)	5 persons
2. Floor statements (Gallo, Eichman, McC)	3 persons
3. Press releases (Eichman)	1 person
4. Report and memos (Smith, Gallo, Nasser, McC)	4 persons
5. Voucher preparation (Smith)	1 person
6. Office expense budgeting and tracking (Not Accounting) (Smith)	1 person
7. Office expense accounting (Smith)	1 person
8. Preparation of Senator's annual financial disclosure report	----
9. Personnel histories	----
10. Scheduling	
a. Official Senate schedule (Rogers, Nasser)	2 persons
b. Washington/Home State schedule (Rogers, Nasser)	2 persons
c. Personal and family schedule	----
11. Washington/Home State (Intra-Senator) Communications	----
12. Communicate with retrieval systems, maail file, and index systems	----

ATTACHMENT C

Below is a listing of the prices for the configuration of equipment to be installed in Sen. Warner's office.

MODEL	DESCRIPTION	QUANTITY	UNIT MONTHLY RENTAL PRICE	MONTHLY TOTAL PRICE
6515-2	OIS 115-2 Master 8.4 Mb Disk and Single Diskette	1	471	471
TC5536-3	48K Telecommunicating CRT/ Keyboard Workstation	1	253	253
5536-3	48K CRT/Keyboard Workstation	3	191	573
6581W	35 cps Daisy Output Printer	2	248	496
SO-8	List Processing for OIS	1	41	41
TSF-31	Twin Sheet Feeder for 6581W	1	83	83
EF-1	Envelope Feeder for 6481W	1	83	83
	Total Monthly Rental Per System			2,000.00

0002a

ATTACHMENT D

Wang Laboratories will provide System Administrators Training (3 day course) for two people (one person per system) at our Rosslyn office.

Wang Laboratories will provide additional training for up to 12 people (6 People per system) at our Rosslyn office. Two training courses for up to 6 people each will be conducted for five--1/2 day sessions with the following course outline:

Day 1 - Day 3	Intro to WP Training
Day 4	Glossary Training
Day 5	Math/List Processing Training and Consultation

Training courses will be conducted concurrent with the installation of equipment.

Wang Laboratories will provide Self-Paced Training Materials and Training Class Handouts for Replacement Operator Training.

0002a

ATTACHMENT E

I. INVOICES AND PAYMENTS

1. Wang shall render invoices (5 copies) for basic monthly charges in the month following the month for which the charges accrue and are payable when billed. Invoices shall provide as a minimum: (a) Type and description of equipment; (b) Serial number; (c) Basic monthly charge for each machine and feature; (d) Total Charges; and (e) Prompt Discount

II. MAINTENANCE OF EQUIPMENT

A. Wang shall keep the equipment in good operating condition and, subject to security regulations, the Government shall provide Wang access to the equipment to perform maintenance service.

B. Preventive Maintenance. The time required to perform preventive maintenance will not exceed an average of two hours per month per component. Maintenance will be performed during the Principal Period of Maintenance unless mutually agreed otherwise. Wang shall also specify in writing the frequency and duration of the preventive maintenance required for the equipment listed on the order and the Government shall specify the schedule for the performance of the preventive maintenance. This schedule may be modified by mutual agreement.

C. Service Calls. For "On-Call" service, Wang's maintenance personnel shall arrive at the Government's installation site, if located within fifty (50) miles of a Wang Service Center, within four (4) working hours (Principal Period of Maintenance). Beyond fifty (50) miles, two (2) hours of response time shall be added for each twenty-five (25) miles of distance from a Wang Service Center.

D. Replacement Parts. There shall be no additional charges for replacement parts.

E. Maintenance Facilities. The Government shall provide adequate storage space for spare parts and adequate working space including heat, light, ventilation, electric current and outlets for the use of Wang's maintenance personnel. These facilities shall be within a reasonable distance of the equipment to be serviced and shall be provided at no charge to Wang.

F. There shall be no additional maintenance charges for:

(a) Preventive maintenance, regardless of when performed.

(b) Remedial maintenance which was begun during the Principal Period of Maintenance or extension thereof, or when Wang was notified during the Principal Period of Maintenance or extension thereof of the need for remedial maintenance.

(c) Remedial maintenance required within forty-eight (48) hour period due to a recurrence of the same malfunction.

(d) Time spent by maintenance personnel after arrival at the site awaiting the arrival of additional maintenance personnel and/or delivery of parts, etc., after a service call has commenced.

G. MAINTENANCE CHARGES

The basic maintenance applies to equipment located within one hundred (100) miles of the nearest Wang Service Center and forty (40) hours of eight hour shifts (8:00 a.m. to 5:00 p.m., Monday through Friday except Wang designated holidays).

APPENDIX D

DESCRIPTION OF PILOT TEST IN EACH PILOT TEST OFFICE

Report on the Office Automation Pilot
in Senator Armstrong's Office
July 1983

Installation of Equipment

Equipment configuration

The contract agreement between Senator Armstrong's office and Sperry Corporation provided five Sperrylink deskstations, one with a single diskette drive, and one correspondence-quality printer with a cut-sheet feeder and paper tray. A terminal multiplexer connects the terminals to a distributed office processing system (DOPS) with a 50 MB disk and a tape drive for backing up the disk. The deskstations in Senator Baucus' suite are also connected to this DOPS.

Installation method

The initial site survey was conducted on May 2, 1983. Participants included a Sperry sales representative and two customer engineers, three Computer Center staff members, and a representative from the Rules Committee Technical Services staff. A major problem arose in deciding where to locate the CPU designated to be shared by Senator Armstrong's and Senator Baucus' offices. Senator Baucus' representative stated that the large amount of space required to house the DOPS (an 8' x 6' area) would force them to move a staff member out of their newly-established office in the Hart Building, or to eliminate one of their few conference areas. Senator Armstrong's Administrative Assistant was concerned about the possible problems arising over access to this central unit. He requested that the Rules Committee find a neutral site for the DOPS. If no neutral site could be found, he wanted the Rules Committee to sign an agreement that another DOPS would be ordered at the first sign of any problem between the offices. When the Rules Committee neither located a neutral site nor signed the agreement, Senator Armstrong's office agreed to house the DOPS.

The deskstations arrived during the week of May 23. On May 26, two Sperry customer engineers conducted a pre-installation site survey and left a clear plan for the installation with the offices and with the Computer Center member of the OAP team. During the installation, Sperry engineers discovered that a hole necessary for cabling the terminals to the CPU had been drilled in the wrong place in Senator Baucus' office, no power receptacle was available for the DOPS in Senator Armstrong's office, and no tables were in place on which to place the equipment. (The office had previously reported lack of terminal tables as a problem.)

The DOPS arrived during the first week in June, but could not be connected for approximately one week because there was no electric receptacle. The Superintendent's office told the Senator's office they had no money to install the receptacle; Sperry said they would purchase it. Eventually, the

Superintendent's office procured and installed the needed receptacle.

The entire system was operational by June 12. Customer engineers stopped by every morning for approximately three weeks to make certain all was running smoothly.

Applications

Desired applications

- Word processing for preparation and review of ad hoc letters ("Dear Colleague" and draft letters), floor statements, press releases, newsletters, opinion page articles, speeches, memos and reports.

  The Senator is an active editor, familiar with newspaper operations, and wants the same procedures to be followed in his office to eliminate paper movement.

  Office staff expressed a desire to replace current typewriters, memory typewriters and a Qyx with office automation equipment.

- Files and reference systems to index, cross index and retrieve reference materials, news clips, reports, and papers by a variety of combinations.

- Scheduling of invitations the Senator has accepted, with dates and times, for visual display or printout by week, month or year. The goal of this application is to gain control of the tremendous flow of paper, phone calls, notes, and messages, many of which are duplicative. Historical files are less important to the operation of the office.

- Office account and payroll functions for monitoring accounts, making sure that spending stays within the office allowance, and preparing vouchers with repetitive information. The Senator's staff predicts that the need for this application will grow, especially as the Senate moves to an advance payment system for travel, thus complicating bookkeeping.

- Personnel files to eliminate the 14-page paper spreadsheet used to review personnel leave and other personnel data.

- Integrated systems to enable multiple use of all information on the system without rekeying.

- Preparation of Senator's annual financial disclosure report.

- Communications between Washington and home state offices, with retrieval systems, and with the Newsletter Mail File and Indexing systems.

Actual application usage

- Word processing, with simple line drawing capabilities, sorting and column moving, calculating and forms design.

Training, documentation and support

Training

A customized two-day course at Sperry's McLean facilities replaced the usual 4-day course because offices requested shorter training time. Due to this reduced training time, staff learned only half of the deskstation's capabilities; subsequently, the staff regretted requesting the reduced training time. The instructor suggested spending three full days at work to complete the training, using the self-study materials provided.

Sperry's instructor had good presentation skills, and maintained calm under the difficult situation of teaching in two days what she would normally teach in four. Her understanding of Senate applications was limited, resulting in too much time spent on areas of little need. There were no tests and only minimal instructor checking to be sure that students were learning. Lectures were conducted away from terminals, making it difficult for novice users to understand. The terminal room was not in a classroom style, so during exercises, instruction was difficult to give and demonstrations difficult to see. The concept of using a diskette was difficult and time consuming for the group to learn; too much time was spent on learning diskette procedures which would be used minimally, if at all, in Senate offices. Not enough time was spent on basic concepts for the novices. During the first hour, some staff were confused by words like "polling," "fields," "offline/online," and "loading," which were not defined. No time was spent relating features to office needs. Good exercises provided practice using all keys and commands.

Documentation

Extensive documentation and self study guides provided to students were not reviewed or used in class. The Senator's staff has uncovered inaccuracies when using the reference manual. The quick reference guide has been helpful.

Vendor support

Vendor support of this office has been excellent. The sales representative, support representatives, and customer engineers have all been available as needed and even when not needed. The support has been so extensive, it has sometimes been overwhelming. On once occasion, one call brought six Sperry people to the office.

Computer Center support required

Most Computer Center support involved coordinating equipment delivery and installation and training. Extensive support was necessary during the installation.

The Computer Center member of the OAP team was originally asked to serve as systems administrator for the offices to eliminate any interoffice tensions that may have resulted because of the shared CPU. Because of the nature of the pilot, the offices had to perform their own administrator functions. These activities include monitoring and controlling the use of the system for the purposes of archiving, backup, security, recovery and usage analysis; arranging equipment; installing and testing new software; training all staff in the use of new features; troubleshooting system or operator problems; and conducting regular maintenance procedures.

Communications

Desired applications

Senator Armstrong's staff wants to integrate their office automation system with all other systems in the office, including Dialcom, CMS, the Newsletter Mail File and Indexing systems. However, a communications capability was not included by Sperry in the initial equipment and software configuration. The sales representative said that communications might be established in two ways: 1) provide CP/M for the single communicating terminal with diskette drive, add Sperry's TTY Communications Utility and connect it to the Computer Center's dataswitch, bypassing the Sperry CPU; or 2) add a distributed communications processor and go through the Office of the Architect's Univac 1100 to the Senate computers.

Evaluation

Positive factors

The office has been satisfied with Sperry's word processing capabilities, especially the clearly marked English words on the tops and fronts of keys, the methods for repagination, variable margins, and combining files, and the print quality. "Speed messages" have been helpful for sending system updates and "how-to's" to other Sperry users. The ability to create bar graphs and charts, and to store, retrieve, and change data in them has been very useful.

Negative factors

The office has been dissatisfied with their inability to scan through the full text of all documents on the disk to find a needed document (only the first page can be scanned). Recently, they have been troubled by degraded response time when retrieving documents or repaginating (with the disk only 4% full). The DOPS back-up requires three extra steps because of an undefined problem with the associated tape drive. The lack of the ability to merge name/address information with letter bodies necessitates rekeying names and addresses on each letter and each envelope. The sheet feeder does not take carbons, so they have to copy letters. In addition, they must change the paper in the sheet feeder for letterhead and second pages because there is no double sheet feeder. The typewriter mode is not used because operators can't see under the ribbon.

The systems administrator was not prepared for the enormous amount of time necessary for her new role. Her usual work is at least one month behind.

Recommendations

Because the office was trained only one month ago, it is too soon to make any definite recommendations. However the following generalizations can be made:

1) Shared CPU - Offices sharing CPUs must be willing to make accomodations in their schedules to allow for system down time for backing up files. If the CPU requires in-house maintenance and the system administrator in the office housing the CPU is unavailable, then the system administrator from the sharing office needs access to the office housing the CPU. These factors should be considered when deciding whether this is an appropriate configuration for Senate offices.

2) Systems Administration - Systems administrator training lasts four days beyond the four day operator training. Both Senator Baucus' and Armstrong's administrators spent nearly full-time with the system during its first month's operation, to the detriment of their usual work, and sometimes to the frustration of their coworkers. Some of the systems administrator functions, including training, testing enhancements and new software, communicating changes to all users, and troubleshooting, could be handled by the Computer Center if a limited number of systems were authorized for use in the Senate, and if a typical configuration of each of those systems was located in the Computer Center.

3) Terminal Allocation - To make the most effective use of an automated system, it is necessary to fully automate. That is, each automated section should have a terminal for each staff member. Only then can documents be shared electronically among staff members. To this end, Senator Armstrong's office is moving the Senator's and his secretary's terminals to the legislative area to concentrate their office automation resources.

4) Printer Configuration - Sperry's correspondence-quality printer must be activated from the terminal to which it

is connected. This requires that someone stop working on the terminal connected to the printer for someone else to use it. The office finds this unacceptable, and requires the ability to queue documents to any specified printer.

Report on the Office Automation Pilot
in Senator Baucus's Office
July 1983

Installation of equipment

See Armstrong Report.

Applications

Desired applications

- Database management system with word processing ability for rapid turnaround of mail, and for retention of names, addresses, salutations and other information for future office projects (such as an online "card catalog" of approximately 250 people the Senator calls regularly). All data entered should be searchable. Terminals on every desk would be ideal. Word processing applications include *ad hoc* letters, floor statements, press releases, reports and memos.
- Communication with retrieval systems, Newsletter Mail File and Indexing systems.
- Compatibility with OCR and high-speed printers.
- Scheduling function would be helpful, but could be improvised on a word processor; desire to have computer calculate travel times between appointments.
- Accounting functions, including voucher preparation, office expense budgeting and tracking, office expense accounting, and personnel histories.

Actual application usage

- Word processing, with simple line drawing capabilities, sorting and column moving, calculating and forms design.

Training, Documentation and Support

See Armstrong Report.

Communications

See Armstrong Report.

Evaluation

Positive factors

The office is satisfied with the system's word processing capabilities. Capabilities that are especially useful include:

well-marked, functionally-oriented keys; ability to print on odd-sized paper; ability to design, store and retrieve graphs and tables; ease of editing large reports; and ability to create simple line drawings. They were impressed by the ease with which untrained users learned the system. They have also been pleased with the vendor's onsite support.

Negative factors

The office expressed major concerns from the outset in three areas. They are dissatisfied with the system's inability to communicate with the Senate systems, especially CMS and the Xerox 9700. This inability necessitates duplicative typing of names and addresses, letter information, press documents, and Congressional Record statements. The lack of list processing software makes it impossible to do name/address merge with text for letters, and requires rekeying of names and addresses for envelopes, and data entry for filing integration with CMS. The lack of a dual diskette unit necessary for the spreadsheet application and for the list processing package that Sperry is currently testing limits the office's ability to fulfill its office automation needs.

The lack of an electrical receptacle for the CPU (DOPS) during the first week was a major frustration for both the office and for visiting Sperry personnel who were onsite to teach the staff how to run the DOPS.

Because the CPU the office shares is housed in Senator Armstrong's office, the two offices must coordinate scheduling down time for backing up system disks. This has proven to be difficult.

Lack of a sufficient number of terminals has been a significant problem. Printing documents is possible only from the terminals associated with the printers, causing confusion, bother, and a further reduction in the total number of terminals available for production work.

Recommendations

The recommendations following Senator Armstrong's report also apply to the experience of Senator Baucus' staff. In addition, Senators Baucus' office automation experience prompts the recommendation to provide the software, hardware and personnel necessary to facilitate communications between in-office and centralized Senate systems. Integration is mandatory to eliminate duplication and fragmentation among available systems.

Report on the Office Automation Pilot in Senator Bradley's Office

July 1983

Installation

Equipment configuration

After several meetings with Digital Equipment Corporation's (DEC) Sales Representative, Senator Bradley's office decided to use a centralized system, even though this meant they would receive fewer terminals than if they had chosen microcomputers. The system runs on a PDP 11/44 minicomputer, with 4 MB of memory, 124 MB disk storage, and asynchronous terminals. (The contract specified a PDP 11/24, but DEC has been unable to supply it.) Attached to the processor are five VT100 display screens, two LQP02 letter-quality printers, an RK07 disk drive for backing up the system files, and a DECwriter III typewriter terminal for printing system diagnostics. (The contract specifies five VT102-WA terminals, one LQP02 printer, one LA120 high speed matrix printer, and a tape drive.) Attached to each of the printers is a double-bin sheet feeder, provided by the Computer Center.

Installation method

Senate Computer Center Staff conducted a site survey in Senator Bradley's office during the week of April 4, 1983, to determine the office's needs for additional power, cabling, and air conditioning. Arrangements were made with the Superintendent's office for increased air conditioning from the vent located above the CPU. DEC's Sales Representative said it would take 30-60 days for DEC to obtain the cables, so the Computer Center offered to supply them. Cables and equipment arrived during the week of April 18, 1983. When the cables arrived, DEC was unable to tell Computer Center personnel how to attach the connectors to the cable, or to provide schematic drawings for use by Computer Center technical staff. By the end of the week of May 9, the installation was complete.

Applications

Desired applications

- Word processing for ad hoc letters, floor statements, press releases, speeches, reports and memos. The office wants to use word processing equipment to simplify the editing process, to eliminate re-typing by professional and clerical staff, and to provide clean copies of drafts. Clean copies are particularly important when the Senator becomes involved in editing documents, as he often does. For floor statements, press releases, and speeches, they also want to be able to categorize documents according to subject for later retrieval and reporting.

- Office expense accounting to facilitate the budgeting process, especially projections.

- Personnel histories to facilitate tracking annual and sick leave accrued and used.

- Scheduling for the Senator's official Senate schedule, his Washington/New Jersey schedule, and his personal and family schedules. The office wants to be able to track where in New Jersey (by county) the Senator has and has not been, who (type and name of organization) has extended invitations, and which invitations (type and name of organization) have been accepted and rejected.

- Communications with the Computer Center's data network, to access LEGIS and CMS, and to update the office's Mail File and Index with information from *ad hoc* letters created on the office automation equipment.

Actual application usage

- Word processing -- The office is satisfied with the DEC word processing software, which includes a list processing capability. They are using the system's word processing capabilities extensively for letters, speeches, press releases, statements, and the Senator's daily schedule. The list processing capability is useful when the same letter needs to be sent to several people, e.g., during the intern selection process.

  Printing documents has been greatly simplified by use of two double-bin sheet feeders. The feeders can be loaded with the four most common types of paper, and documents can be routed easily to the appropriate printer and paper bin. However, the office experienced many problems with the sheet feeders, including paper jams and failure to feed properly.

- Office expense accounting -- The office has decided not to use this application.

- Personnel histories -- The software needed for this application has not been delivered.

- Scheduling -- DEC is unable to provide off-the-shelf scheduling software for the PDP11, so the Office Manager began investigating other possibilities. He is considering using the CMS scheduling function for recording information about the Senator's appearances. The scheduling secretary uses the PDP11 only for typing the daily schedule.

- Communications -- The office has not yet had the opportunity to investigate this capability.

Training, Documentation, and Support

Training

Initial training was self-instructional, with additional training conducted in the office by one of DEC's instructors. One person learned the basics and then taught the rest of the staff as much as they could find time to learn.

Although her students knew less than she had anticipated, the DEC instructor made allowances for the circumstances, and made excellent progress. She was able to make classroom examples relevant to her audience and to tailor the content of the class to the needs of the office. Despite a less than ideal learning situation, the staff learned the skills necessary to perform their jobs.

DEC provided three additional days of training for two staffers who are system administrators.

Documentation

DEC provided several types of documentation, including "how to" manuals, reference guides, and quick references. From limited exposure to the materials, they appear to be clearly written, although it is somewhat hard to find things in the "how to" manuals.

Vendor support

The office found the vendor responsive to most of their requests, especially after the initial installation. Equipment problems were solved expeditiously, and operator questions posed to the user hotline were answered quickly and accurately. However, the Office Manager found the liaison role to be very time-consuming. He stated on several occasions that he would prefer to go through Computer Center channels. Frequently, several calls to the vendor were necessary to resolve his problem, while his past experience with Computer Center support has been that one phone call is usually sufficient.

Computer Center support required

During the installation process, the office's OAP team coordinated all of the individuals involved -- Computer Center Network staff, the Superintendent's office, the Architect of the Capitol, DEC Sales Representative, and DEC field engineers. After the equipment was installed and running, little intervention was necessary.

Communications

Desired applications

The office wants to use their VT100s to sign on to Senate services, including LEGIS and CMS. They also want an interface to their Mail File and Index, for letters created using the DEC equipment. To date, the office has been too involved in mastering the word processing applications to become involved in communications.

Evaluation

Positive factors

The office has been very satisfied with DEC's equipment, applications, training and support. They are particularly pleased with the simplicity of the word processing application, and they rely on it heavily for many types of documents.

Negative factors

The office's greatest complaint is the lack of terminals. The Office Manager would like to see a terminal on everyone's desk, except for the people in the mailroom, who use CMS. This would require approximately 25 terminals.

The Office Manager is dissatisfied with the arrangements made for support, and would prefer to go through the Computer Center for all of his problems. He would also like to be able to call on Computer Center support for help in tailoring the office automation applications to fit the needs of each staff member. This role has fallen to him, and requires too much of his time.

The Office Manager expressed concern that the person in his office who had always handled computer applications did not have the time to learn two systems. His preference would be for one system that could handle all of the applications in his office, so that, if necessary, any staff member could fill in for someone else.

Recommendations

The ability to route documents to one of four different kinds of paper appears to be a great advantage for this office. The ability for one person to easily retrieve, edit, and store another person's document is also advantageous. Both of these capabilities depend on the existence of a central processing unit. In considering the type of equipment to be procured, these advantages should be kept in mind.

Report on the Office Automation Pilot
in Senator D'Amato's Office
July 1983

Installation

Equipment configuration

After consultations with representatives from the IBM Corporation, staff members from Senator D'Amato's office decided to test IBM's Displaywriter system for their office automation needs. The contract agreement between Senator D'Amato's office and IBM allowed for two Displaywriter configurations to be installed in the Senator's Washington office. In addition to the terminals and printers, the equipment configuration included two dual disk drives and two sheet feeders. The vendor provided an initial start-up packet of print wheels and ribbons; the Senate Computer Center ordered the remaining supply of print wheels and ribbons for the office.

Installation method

The equipment was installed for Senator D'Amato's office on May 19, 1983. The office worked directly with the vendor for this installation; no support was required by the Computer Center staff. Currently, one Displaywriter is located outside the Administrative Assistant's office, and one is located in the Legislative staff area. On May 12, 1983, Senator D'Amato wrote to the Chairman of the Committee on Rules and Administration requesting a third IBM Displaywriter for his office. The Committee approved the request, and authorized the Computer Center to order another Displaywriter. This third device is scheduled to arrive by the end of August or the first week in September.

Applications

Desired applications

- Word processing for ad-hoc letters, floor statements, reports, and memos. Senator D'Amato's administrative and legislative departments were identified as the staff interested in this application.
- Records processing for facilitating scheduling functions in the office.

Actual application usage

- Word processing is used by two staff members daily to prepare letters, memos, floor statements and speeches. Some of the legislative staff have learned the Displaywriter word processing application, and use it whenever one of the secretaries is away from the terminal.

- Records Processing is used by the Administrative Assistant's secretary to develop the AA's daily and weekly schedules. When the third system arrives, the office hopes to begin using the system to prepare the Senator's schedule.

Training, Documentation, and Support

Training

The contract between IBM and the office specified that the vendor would provide initial training for four staff members from the office. This training involved some classroom instruction, but was mainly self-instructional in the form of manuals and workbooks. The two staff members who have been trained found the materials easy to follow, and the lessons clear and direct.

Documentation

Documentation for the IBM Displaywriter was distributed to the office when the equipment was installed. The materials contain clear instructions, and thoroughly explain every feature of the Displaywriter. The only problem mentioned with the documentation is the large volume of materials.

Vendor support

The delay in the arrival of the equipment was one of the staff's major concerns. After the equipment arrived, it was installed in their office within 2 days, but office staff appeared not to understand the ordering process and delays inherent in the process. IBM representatives were onsite to assist with installation and system testing, and have continued to provide phone support for the office when problems arise. For a number of weeks, IBM representatives visited the office weekly for consultations.

Computer Center support required

Because the IBM Displaywriters are stand-alone units, requiring no additional cabling or electrical hook-ups, the Computer Center had little involvement with this office during the installation process.

Since the installation, the major involvement of Computer Center staff for this office has been in ordering supplies. Initially, there was confusion between Senator D'Amato's Office Manager and representatives from the Computer Center about the supplies. Discussions with Rules Committee staff resolved the problem. The office has made arrangements to buy their own diskettes, and the Senate Computer Center will provide print wheels and ribbons.

Communications

Desired applications

As of this report, Senator D'Amato's office has not requested assistance for any applications requiring communications to the Senate Computer Center's computers.

Integration of existing applications

The office is using the Displaywriters separate from all other applications within the office. The staff is using the Correspondence Management System (CMS) for all their large volume constituent mail, and they will continue to do so.

Evaluation

Positive factors

Senator D'Amato's staff is satisfied with the IBM equipment, applications, and support. The Office Manager stated that the two primary individuals trained on the Displaywriters are extremely pleased with the system, and believe their work is processed more efficiently because of the system. These users have indicated that they found the Displaywriters easy to learn and retain. The equipment is "user friendly," with special keys defined for user ease, allowing more staff to use the system when a terminal is available.

Negative factors

The major problem for this office has been confusion about supplies. The Office Manager was quite concerned when the vendor did not deliver a stock of supplies with the equipment. Once this problem was resolved and the procedures for procuring supplies were clarified, the office appeared to be working without any major concerns.

Recommendations

Provisions should be made for stocking all supplies necessary for office automation equipment, with clear distinctions as to which facility (Stationery Room or Computer Center) will stock which type of supply.

Report on the Office Automation Pilot
in Senator DeConcini's Office
July 1983

Installation

Equipment configuration

The Xerox Corporation provided to Senator DeConcini's office three 820-II Personal Computers and two 860 Information Processing Systems, one with full-page display, the other with half-page. Each of the terminals has connected to it a 40 character per second daisy-wheel printer. The printer attached to the full-page 860 also has a paper feeder attachment.

Installation method

No site survey was necessary, since all of the equipment is stand-alone. The first 820's were delivered in early April, and the final 820 and the two 860's were delivered during the week of April 20th. The 820's were assembled by the Office Manager. Xerox personnel assembled the more complicated 860's.

Applications

Desired applications

- Word processing for ad hoc letters, floor statements, press releases, speeches, reports, and memos. The office would like to use the word processor's capabilities to create and maintain an index to press releases, and to index the Senator's sponsored bills and key votes.
- Voucher preparation.
- Office expense accounting to facilitate the budgeting process, especially making projections.
- Personnel histories to facilitate tracking annual and sick leave accrued and used.
- Scheduling for the Senator's official Senate schedule, his Washington/New Mexico schedule, and his personal and family schedules.
- Communications to the Computer Center's data network, to access LEGIS and CMS, and to update the office's Mail File and Index with information from ad hoc letters created on the Xerox systems.

Actual application usage

- Word Processing -- The office has made extensive use of the Xerox equipment's word processing capabilities. Because the 860's have a merge capability, one of them is used for creating the same letter to several people. Documents created on the 860 can be printed using proportional spacing, so this device is used for "gold seal" letters. Documents typed on an 820 can be run through a conversion routine for subsequent printing or editing on the 860. The 860's are used by production typists, while the 820's, being simpler to use, are used by the Legislative Director, the Office Manager, and a light typist.

  The secretary for the press section of the office has replaced her typewriter with the half-page 860.

  The Legislative Director and his secretary work in conjunction to create clean documents. He does the initial typing on an 820, edits the copy, then gives his diskette to his secretary. She converts it to 860 format, and sometimes runs a spelling check program and prepares the final copy.

- Voucher preparation -- The Office Manager is using the system to reconcile the vouchers, but not to create them.

- Office expense accounting -- The Office Manager is using this application extensively.

- Personnel histories -- The Office Manager has not started using this application yet.

- Scheduling -- Xerox has not provided any software for this application.

- Communications -- The office has not yet had the opportunity to investigate this capability.

Training, Documentation, and Support

Training

Training was provided onsite by Xerox personnel. Because a representative from the Computer Center was not present, it is impossible to evaluate the method of instruction, except from observation of the results. New operators in the office seem to have no more than the normal amount of trouble operating their machines. However, they depend heavily on the assistance of the Office Manager whenever they encounter problems.

Documentation

No Xerox documentation was in evidence in the office.

Vendor support

The account representative for Xerox was often difficult to contact, but was helpful when reached. The office's first experience with the user hotline was not positive. When asked how to quadruple space a document, hotline personnel suggested a method that was much more time-consuming than the method the account representative suggested during his next visit to the office. In general, the office seemed to get along well on its own.

Computer Center support required

Very little support has been necessary for this office for two reasons. The stand-alone systems require little installation support, and the Office Manager has been able to handle most of the office's problems by himself.

Communications

Desired applications

The office wants to print on the 860 printer text files that are created on CMS. They also want to use their terminals to access CMS and LEGIS, and to send text files back to CMS. Communications applications have not yet been addressed by the office.

Evaluation

Positive factors

The office has been satisfied with Xerox's equipment, applications, training and support. They particularly like the print capabilities of the 860's. The Office Manager uses the spreadsheet application for a variety of purposes, including scheduling a mixture of duties for summer interns.

Negative factors

Now that the systems are up and running, about half of the legislative staff has asked for a terminal. The Office Manager would like to see a terminal on every desk, but thinks he would face considerable resistance from some staffers.

The Office Manager finds the limitations of the spreadsheet frustrating. These are caused by the limited amount of memory that can be installed with the 820.

When asked for his concept of the ideal system, the Office Manager responded that it would combine the best capabilities of the Xerox equipment (its advanced word processing and spreadsheet applications) and CMS (its powerful data processing, large storage area, and flexibility and expandability). He also indicated that the ideal system would provide easy access to all authorized systems from all terminals, without having to change settings or remember long sign-on sequences when changing between systems.

Recommendations

Every effort should be made to integrate the office automation equipment with other Senate systems. Without this total integration, offices will continue to complain about duplication of effort, the difficulty of using a combination of systems, and the waste of staff time involved in running duplicative systems.

Report on the Office Automation Pilot
in Senator Dole's Office
July 1983

Installation

Equipment configuration

After consultations with representatives from the Honeywell Corporation, staff members from Senator Dole's office elected to test Honeywell's DPS6/34 system for their office automation needs. The contract agreement between Senator Dole's office and Honeywell allowed for four terminals and two printers to be installed in the Senator's Washington office. In addition to the terminals and printers, the equipment configuration included a processor, a single-sheet feeder, two acoustic covers for the printers (provided by the Senate) and an initial supply of ribbons and printing thimbles.

Installation method

After several meetings with the office and the vendor, the Senate Computer Center staff conducted a site survey in Senator Dole's office to isolate any problem areas which may have delayed equipment installations. Present at the site survey, conducted March 29, 1983, were representatives from the Senator's office, the Senate Computer Center and two representatives from Honeywell. The survey identified where each terminal and printer were to be located, and whether there was sufficient power to support each device. The Executive Assistant has indicated that the office may decide to relocate equipment by the end of the summer to allow more staff to use the system. The terminals and printers are now installed in two rooms within the Senator's suite. All equipment was installed and operational the week of May 3, 1983.

Applications

Desired applications

- Word processing for typing and editing letters, memos, speeches, reports, detailed schedules for the Senator, radio commentaries, and telephone logs.
- Forms capabilities to prepare Request for Services and Request for Assistance forms, payroll authorization, vouchers, and financial disclosure statements.

- o Records processing to facilitate handling personnel lists (including their home phone numbers, leave records, and parking permits), salary administration, subscription lists, charity tracking, travel reimbursements, honorarium tracking, and the invitations files.

- o Spreadsheet for budget planning and projections, taxes, and the expenditure report.

Actual application usage

- o Word processing is used regularly for preparing memos, letters, speeches, and various office reports. The office has also prepared the office phone lists for all the staff using the word processing software.

- o Forms capability is used by one staff member to prepare the Senator's weekly schedule on a pre-designed form. The office is beginning to use the forms capability to perform some calculations for the financial disclosure statements.

- o Records processing is used to compile the staff phone lists and the invitations files. The office prepares many responses to invitations using the records processing software. The staff also processes many of the Senator's personal notes and letters using this application.

- o Spreadsheet applications are used heavily by one staff member to prepare the office budget. When the staff can complete their training on Infocalc, they anticipate more activity with the spreadsheet applications.

Training, Documentation, and Support

Training

See Kennedy report.

Documentation

See Kennedy report.

Vendor support

In general, Senator Dole's staff has expressed satisfaction with the support provided by Honeywell, particularly the onsite support provided by one of the Honeywell instructors. A problem with one of the printers required onsite diagnostics by the technical staff from Honeywell. Once this problem was resolved, all the equipment worked well.

The Executive Assistant stated that there was some confusion when the office contacted the Boston hotline number for assistance. The Boston staff asked many questions the office considered too technical. This information was conveyed to Honeywell representatives, who were receptive to resolving the confusion. Honeywell assigned a full-time, onsite support representative for the first ten days after the equipment was installed and the staff trained. The vendor also made weekly visits to the office for the six weeks following the ten days of onsite support. After the six weeks, Honeywell allowed the office to contact them directly for the next 90 days, after which the office was instructed to place all equipment and application calls to a Boston hotline number.

Computer Center support required

Same information as in Senator Kennedy's report, except that the equipment for Senator Dole was installed and operational the week of May 3, 1983.

Communications

Desired applications

Senator Dole's office has not requested assistance for any applications requiring communications to the Computer Center's computers. The Executive Assistant indicated that the office may be interested in communications with other systems in the future.

Integration with existing applications

The staff is using the Honeywell system separate from other applications within the office. Large volume correspondence is done on the Correspondence Management System (CMS), while low volume, unique documents are processed on the Honeywell system. Office staffers are also using the Honeywell system to plan the office budget and prepare various financial reports and statements. The Honeywell applications the office is using are those that had not been automated. The staff trained on the Honeywell system are not familiar with existing Senate applications.

Evaluation

Positive factors

The staff is satisfied with the Honeywell equipment, applications, and support. The Executive Assistant stated that the word processing application is relatively easy to use after the staff has repeated experience with the system. Many of the keys are defined for user ease, such as keys for signing on, paging through a document, moving, copying, underlining, deleting, etc. The office found the onsite support and consultations provided by the vendor especially beneficial.

Negative factors

The office found it difficult to deal with hotline support that was completely unfamiliar with their circumstances, knowledge level and specific applications. They felt the questions asked by Honeywell's Boston hotline staff were too numerous and too technical.

Recommendations

Senate staff have become accustomed to dealing with support personnel who are familiar with the Senate office's structure and procedures, and with their office's specific applications and problems. They also expect immediate, onsite assistance when they have a problem that cannot be solved on the phone. The Computer Center's Educational Services and Support Division is organized to provide this type of support, and it is highly unlikely that any vendor could provide it as effectively.

Report on the Office Automation Pilot in Senator Huddleston's Office
July 1983

Installation of equipment

Equipment configuration

The contractual agreement between Senator Huddleston's office and Wang provided five CRT workstations, one with telecommunicating features, and one daisy-wheel printer with a twin sheet feeder and envelope feeder. The terminals are connected to the OIS 115-2 Master 8.4 MB disk and CPU.

Installation method

After trying repeatedly to establish an installation date, Wang personnel informed the OAP team that the equipment could not be delivered before mid-to-late summer. The Rules Committee member of the OAP team called Wang's Vice President of Southern Operations and its Manager for Washington Federal Systems to complain about the installation date and the lack of responsiveness by the sales representative. The next day (May 12), the Wang distribution center called to say the terminals were being tested and would be shipped within two weeks. When Senate personnel pressed for a delivery date, Wang personnel agreed to have the shippers call when they left with our equipment.

The equipment arrived unannounced on June 3rd. The Wang customer engineer arrived the next day to install the equipment. Cable had already been installed by Computer Center personnel.

Applications

Desired applications

- Word processing for ad hoc letters, floor statements, speeches, press releases, reports and memos.
- Scheduling short- and long-term appointments.
- Communications between Washington and Kentucky offices, with retrieval systems, with the Newsletter Mail File and Indexing systems, and with home computers to enable working at home in the evenings.
- Office expense budgeting and tracking.
- Office expense accounting.

Actual application usage

- Word processing with capabilities for dual column print, a glossary to recall stored text or commands, merging names/addresses with letters, and repagination.
- List processing to create and maintain files of information, to selectively retrieve the information, and to create reports, memos and letters using this information.
- Math calculations.

Training, Documentation and Support

Training

Customized training reduced training time by more than half. Too much time was spent on the easiest features (3 half-days on basic word processing); too little time was spent on more difficult, essential features (file back-up, list processing, merge, glossary). The disk drive in the training room was so noisy that it was difficult at times to hear the instructor. Visuals were difficult to see because they were poorly constructed. The instructor lectured and then during the exercises talked the whole group through each step of each exercise; instructor time would have been better spent giving individual help during exercises. Much time was wasted typing and printing extremely long exercises. Terms that were not well-defined caused confusion. Irrelevant and sometimes nonsensical examples were frustrating and did not help students learn how to apply Wang features to their own work.

According to office staff, systems administrator training took three days to present a half day's worth of information. Training was geared for the OIS 140, which uses more than one disk, although only one person of six in class used OIS 140; an entire day was spent on OIS 140 features which had no relation to the Senate's OIS 115. Instructors provided no applications training specific to the Senate.

Documentation

Self-paced word processing booklets which arrived with the equipment were not used in classroom training. Separate pages were copied and distributed during the class, usually after students had learned the features. During the half-day spent on list processing, each person received a 150-page List Processing Training Workbook. The only other documentation used in training was an 80-page exercise booklet used only five times.

Vendor support

The Customer Engineer (CE) did not attend the initial site survey. The Sales Representative rarely returned telephone calls. During the first visit from the Support Analyst, we learned that we were entitled to only 14 hours of free consultation from her, after which Wang would charge us for her visits. During the initial telephone contact with the Support Analyst, she queried the Computer Center member of the OAP team about information she should have learned from the Sales Representative: who the Computer Center contact was, who the offices and contacts were, what her role was, when installation and training dates were, etc. Communications among Wang personnel appeared minimal. Frequently, the hotline number rang and no one answered it. After installation, the CE always arrived within the designated 5-hour time period.

Computer Center support required

The initial start-up package of supplies was too small and ribbons ran out during the first week the equipment was operational. This required scrambling to locate ribbons to keep the operation going. Major support was required in the communications area (see below). Other support involved coordinating the installation and training.

Communications

Desired applications

The office staff expressed a need for the following communications capabilities: (1) moving documents back and forth between Wang and ATMS; (2) capturing index information from initial Wang input for entry to CMS, Index and Mail File, without retyping; (3) moving documents back and forth between Wang and home computers (IBM PC and Apple IIe).

Extent to which expressed needs are met

With the assistance of the OAP team and Computer Center personnel, the office is now able to transfer ATMS files to Wang and back to ATMS. When ATMS documents are transferred to Wang, some unexpected characters appear in the file because of control characters, but the office easily edits these files. A representative from ESS is helping the office edit ATMS files directly on the communicating terminal, using specific control characters and line editing.

The ESS Representative is gathering information on how to capture index information from initial Wang input to be transferred to CMS files. The CMS vendor believes software is needed. Wang is checking the possibility of using the system's "note feature."

A Request for Network Services was issued 7/18/83, requesting modems for the IBM PC and Apple IIe.

Ease of establishing communications

The ATMS-Wang file transfer presents no problem. Because the telecommunicating terminal is asynchronous, editing through ATMS is clumsy. The Computer Center is experimenting with this application.

The data file transfer will probably require specialized Wang and CMS software, as the Wang records need to be structured in the CMS database manager format.

Computer Center support required

Technical Control Staff and Educational Services and Support staff are involved in experimenting with editing ATMS documents. Since the CMS file transfer is more complicated, much time has been spent trying to gather information from Wang. To date, the company has not been responsive in returning phone calls.

Evaluation

Positive factors

The office is satisfied with the glossary feature, which enables them to store various letter formats, printing commands, and signature blocks; with the list processing capabilities which allow them to merge names and addresses with letters; with the document summary sheet associated with each document which enables them to replace their CMS data stamp; and with the basic word processing features, which they use to type and revise testimonies, memos, statements and letters.

Negative factors

The office is dissatisfied with the printer and sheet feeder, which have caused many problems; with loss of documents caused by power fluctuations; with vendor support and training; with the small number of terminals; with the inability to queue documents for overnight printing; and with the inability to communicate with other systems (under development).

Recommendations

Because office staff received basic training only a month ago and administrator training only two weeks ago, it is too soon to make any definitive recommendations.

Report on the Office Automation Pilot
in Senator Humphrey's Office
July 1983

Installation

Equipment configuration

Digital Equipment Corporation (DEC) provided to Senator Humphrey's office, at no charge to the Senate, a VAX 11/730 minicomputer, attached to which are ten VT102 CRT terminals, three VT100 CRT terminals, and four letter-quality daisy-wheel printers, one with a sheet feeder attachment. The Senator, the Administrative Assistant, the Senator's secretary, and the A.A.'s assistant each have a terminal; one terminal is located in the reception area, and several are concentrated in the Legislative area. Printers are located throughout the suite.

Installation method

No formal site survey was conducted in this office. However, the Computer Center installed the cables needed for connecting the CRTs and printers to the DEC CPU. The initial shipment of terminals was operational by the beginning of May. DEC provided extensive onsite support during the installation process, to make sure the system was up and running well. DEC personnel remained in the office for several weeks, ironing out the bugs in the system, and helping the staff get started with their applications.

Applications

Desired applications

- Word processing for ad hoc letters, floor statements, press releases, speeches, reports, and memos. The Senator edits many of the documents in the office, and wants to do his editing electronically. The office wants to eliminate the repetitive typing of ad hoc letters that is necessary because the Legislative Assistants have only typewriters. The Administrative Assistant would like to free typists to do more substantive work, such as casework and academy nominations.

- Preparation of vouchers and the Senator's annual financial disclosure report.

- Office expense accounting to facilitate the budgeting process, especially projections.

- Personnel histories to facilitate tracking annual and sick leave accrued and used.

- Scheduling for the Senator's official Senate schedule, his Washington/New Hampshire schedule, and his personal and family schedules. The office has used the CMS scheduling function, but has made only partial use of it because only one of the two schedulers had access to get a terminal.
- Communications through the Computer Center's data network, for file transfer to CMS, and for connection to a terminal in Concord.

Actual application usage

- Word processing -- This application is used heavily by everyone in the office with access to a terminal. They experienced some problems initially when using a pre-release version of the word processing software. After the bugs were ironed out, the office was very happy with the VAX's word processing capabilities.
- Office expense accounting, voucher preparation, financial disclosure forms, and personnel histories -- None of these applications has been used. The software was made available only recently.
- Calendar management is used to prepare the Senator's schedule. Another use for the VAX calendar application is to schedule meetings with a selected group of staffers. The system asks for information pertinent to the meeting, then polls the schedules of everyone attending and finds the first available time. The system then sends a message informing the attendees of the scheduled meeting.
- Communications have not yet been established between Washington and Concord, but the terminals can be used to access CMS, and file transfer has been tested.
- Electronic messaging was not one of the applications originally requested by the office, but it was provided by DEC and is being used heavily by most of the staff.

Training, Documentation, and Support

Training

Initial training was self-instructional, with additional training conducted in the office by one of DEC's instructors. No one from the Computer Center attended the training, so it is impossible to evaluate it. However, everyone in the office who uses the system seems to understand how it works, and to have only minimal problems.

The Senator was trained individually on the applications he will use.

Documentation

DEC provided several types of documentation, including "how to" manuals, reference guides, and quick references. They appear to be clearly written, although it is somewhat difficult to locate specific information in the "how to" manuals.

Vendor support

Between one and three DEC support personnel were onsite for the first three weeks of system operation. These people provided support both for the hardware and for the software, giving instruction to the novice users as needed.

Computer Center support required

During the installation process, the office's OAP team coordinated the individuals involved -- Computer Center Network staff, the Superintendent's office, the Architect of the Capitol, DEC Sales Representative, and DEC field engineers. Once the equipment was installed and running, little intervention was necessary.

Communications

Desired applications

Because the office uses a subsystem of CMS, the Correspondence Tracking System (CTS), to log in and track their mail, they want to transfer text files created on the VAX to CMS, for subsequent letter creation. For responses to be logged out of the system when completed, they must be created on CTS. This also makes it possible to capture history information for these letters.

The office also wants a terminal in Concord tied into the VAX in Washington, for sending files back and forth, and for the Administrative Assistant to sign on to the system while he is in the state office. This application is crucial to the Administrative Assistant, because he has become highly dependent on the use of electronic messaging for communicating with the staff.

Extent to which expressed needs are met

No terminal has been installed in Concord, so that application remains to be implemented.

The terminals in Washington can be used to sign on to CMS and to transfer files. However, some problems remain with the file transfer. The line wrap feature of the VAX seems to transmit control characters that cause errors when transmitted to CMS. Some way needs to be found to strip these control characters out of the file before it is transmitted. The aspect that the office is not happy with is that a few CMS text commands need to be added to the files after they are transferred, since the VAX commands for indenting, underscoring, etc., cannot be translated to CMS.

Computer Center support required

Several meetings between Computer Center's and DEC's respective support and technical personnel were required to clearly define the requirements for communications. Computer Center staff installed communications equipment and lines between the VAX and the dataswitch. An ESS support person has spent many hours in the office working on the interface to CMS.

Evaluation

Positive factors

The office has been very satisfied with DEC's equipment, applications, training and support. Because everyone in the office has access to a terminal, some applications have been possible in this office that are not possible in the other pilot offices, especially electronic messaging and electronic calendar management.

The staff relies heavily on electronic messaging for communicating with the Administrative Assistant and the Senator. The Administrative Assistant says he is much more productive now that he doesn't have to push a lot of paper around. He also doesn't lose things. When he reads an electronic message, he normally takes immediate action, either sending a message back to the originator, or forwarding the message to someone else (usually the Senator), often adding his own comments.

The Administrative Assistant also uses the calendar management application quite often. With it, he can identify the people with whom he wants to meet, outline the parameters of the meeting (length, earliest date, etc.). The system then finds the first available time and sends a message to those involved, asking them to confirm their availability and intention to attend. This means everyone must keep all of their appointments on the system calendar; this is only possible because everyone in the office has easy access to a terminal.

The Senator's secretary is pleased with the calendar application, and uses it for all of the Senator's appointments. The features she especially likes are the fact that she can leave the terminal signed on all day, she can display a day or week very quickly, and she can add reminders for the Senator on each day's calendar.

Negative factors

The office has not expressed dissatisfaction with any feature of the VAX. However, they are not satisfied with the procedures for transferring text files from the VAX to CMS, a problem the Computer Center is continuing to address.

Recommendations

The advantages of a terminal on every desk, and the applications that this makes possible, are obvious in this office. Electronic messaging is an important part of office automation. If the Senate makes a commitment to office automation, it should be ready to spend the money necessary to make it work.

Report on the Office Automation Pilot
in Senator Kennedy's Office
July 1983

Installation

Equipment configuration

After consultations with representatives from the Honeywell Corporation, staff members from Senator Kennedy's office decided to test Honeywell's DPS6/34 system for their office automation needs. The contract agreement between Senator Kennedy's office and Honeywell provided four terminals and two printers to be installed in the Senator's Washington office. In addition to the terminals and printers, the equipment configuration included a processor, a single-sheet feeder, two acoustic covers for the printers (provided by the Senate), and an initial supply of ribbons and printing thimbles.

Installation method

After meeting several times with the office and the vendor, staff from the Senate Computer Center conducted a site survey in Senator Kennedy's office to isolate any problems which may have delayed equipment installations. Present at the site survey, conducted March 29, 1983, were representatives from the Senator's office, the Senate Computer Center and Honeywell. The survey identified where each terminal and printer would be located, and whether there was sufficient power to support each device. The technical engineers from Honeywell expressed concern about where the Senator's staff decided to place the processor -- a location in the office without sufficient air conditioning. The staff decided to move the processor to another location in the same room to allow more air circulation around the processor.

Despite the site survey, it was discovered one week before the scheduled delivery date that the power supply available for the processor was inadequate. The problem was resolved by removing some office equipment from the power supply used by the processor, and then ordering additional power for the office. This problem could have delayed the equipment's installation by a month if the vendor had insisted on a dedicated power supply.

The terminals and printers were installed in four rooms in the Senator's suite. All equipment was installed and operational the week of May 9, 1983.

Applications

Desired applications

- Word processing for typing letters, memos, and speeches.

- Forms capability for preparing vouchers and financial disclosure statements.
- Records processing to facilitate handling intern applications, office inventory, academy nominations, personnel files, salary administration, honorary memberships, travel reimbursements, foreign gifts, recommendations and endorsements, charity tracking, equipment inventory, resume tracking, invitations tracking, and scheduling.
- Spreadsheet application for budget planning and projections, for the clerk-hire report, and for the office expense accounts.

Actual application usage

- Word processing applications are being used regularly by this office. The legislative staff use word processing to create memos, letters, and some speeches.

Training, Documentation, and Support

Training

Honeywell provided three days of training for three staff members from Senator Kennedy's office for basic word processing skills during the week of May 3, 1983. The same class was repeated for three other staff members the week of May 9, 1983. The classes were conducted at Honeywell's Crystal City demonstration center. The Senate Computer Center member of the OAP team attended the first of these classes to observe training and to learn the basic capabilities of the Honeywell system.

The quality of the instruction provided to Senator Kennedy's staff was excellent. The instructor introduced basic word processing concepts, conducted an overview of all the equipment, discussed terms commonly used in word processing, and described the class objectives. The Senator's staff learned the word processing application easily. The instructor was prepared for the Senator's staff, and modified some of the training for the Senate applications. After a morning of basic concepts and equipment introductions, she geared each student for self-paced instruction, and allowed each to proceed at his or her own speed. The Honeywell training was designed to be self-paced, with question and answer routines followed by exercises asking students to create documents using newly-acquired skills. Review sessions held throughout each day were particularly helpful in ensuring that all students were following the outline and understanding the concepts.

Documentation

Documentation for the Honeywell system was distributed to the students in the classroom, with an explanation of the comprehensive user guide and all the accompanying materials. In addition to the comprehensive guide, Honeywell provided a workbook for the self-paced instruction, a brief "how-to" guide, and an outline for training. All the materials are well written and succinct. Directions and examples were provided throughout the materials, with good summary sessions at the end of each chapter.

Vendor support

Members of the staff have expressed satisfaction with the vendor support provided by Honeywell. Any problems have been addressed and resolved quickly. Honeywell assigned a full-time, onsite support representative for the first ten days after the equipment was installed and the staff was trained. The vendor also made weekly visits to the office for the six weeks following the initial onsite support. After the six weeks, Honeywell allowed the office to contact them directly for the next 90 days, after which the office received instructions to place all equipment and application calls to a Boston hotline number.

Computer Center support required

After the contract was awarded, the Senate Computer Center member of the OAP team spent large amounts of time with Honeywell representatives, planning for and coordinating the installation. During the installation, Senate Computer Center staff installed cable and coordinated the activities of the various individuals involved. Since the equipment installation on May 9, 1983, the amount of Computer Center time devoted to the office has decreased significantly.

Communications

Desired applications

Senator Kennedy's office has not requested assistance for any applications requiring communications to the Computer Center's computers. The office may request access to our LEGIS/SCORPIO systems after they are secure with their Honeywell applications.

Integration with existing applications

Senator Kennedy's staff uses the Correspondence Management System (CMS) to process large volume constituent correspondence. They intend to use the office automation equipment for functions currently not automated within their office, such as budget planning, spreadsheet analysis, and detailed scheduling. They will continue to use existing applications, such as CMS and LEGIS, from their Hazeltine terminals, but would be interested in using the Honeywell equipment in the future to access these systems.

Evaluation

Positive factors

Senator Kennedy's staff is satisfied with the Honeywell equipment, applications, and support. Several staff members had

had some experience with other systems, and they found the Honeywell word processing application easy to use and to remember. Many of the keys are defined for user ease, such as keys for signing on, paging through a document, moving, copying, underlining, deleting, etc. These features make the equipment useable by many staff members in the office.

Because of the success of the system in this office and the willingness of the staff to learn the system, Honeywell has identified a "systes administrator" to manage the system within the office. This person will receive additional information about the system from the Honeywell representatives. After receiving this additional training, the systems administrator will be able to define new users to the system, to define groupings of documents (a system capability for document security and access in the office), and to perform system back-ups.

Negative factors

It is too early to measure problem areas, outside of installation problems, as the office has only been fully operational for two months and has been working primarily on word processing.

Recommendations

To ensure that any future equipment installations are performed as efficiently as possible, members of the Computer Center staff and the Senate electricians should be consulted well in advance of equipment delivery. This would alleviate problems with cabling, electrical wiring, and air conditioning.

Report on the Office Automation Pilot
in Senator Mattingly's Office
July 1983

Installation

Equipment configuration

The Xerox Corporation provided to Senator Mattingly's office five 820-II Personal Computers, and one 860 Information Processing System with full page display. All but one of the terminals has connected to it a 40 character per second daisy-wheel printer. The printer attached to the full-page 860 also has a paper feeder attachment.

Installation method

No site survey was necessary, since all of the equipment is stand-alone. The first 820's were delivered in early April, and the final 820 and the 860 were delivered during the week of April 20th. The 820's were assembled by the Press Assistant. Xerox personnel assembled the more complicated 860.

Applications

Desired applications

- Word processing for ad hoc letters, floor statements, press releases, speeches, reports, and memos.
- Voucher preparation.
- Office expense accounting to facilitate the budgeting process, especially making projections.
- Personnel histories, to facilitate tracking annual and sick leave accrued and used.
- Communications to the Computer Center's data network, to communicate to the Senator's Savannah office, and to update the office's Mail File and Index with information from ad hoc letters created on the Xerox equipment.

Actual application usage

- Word processing -- The office has made extensive use of the word processing capabilities. Because the 860 has a merge capability, it is used for creating the same press release to be sent to several papers. Documents typed on an 820 can be run through a conversion routine for subsequent printing or editing on the 860. This capability is used by the Press Secretary, who drafts a release on the 820, and gives his disk to his assistant, who produces the final copy on the 860. The

Administrative Assistant uses the 820 for drafting speeches.

Training, Documentation, and Support

Training

Training was provided onsite by Xerox personnel. Since a representative from the Computer Center was not present, it is impossible to evaluate the method of instruction, except from observation of the results. The staff members who use the equipment frequently seem to have few problems.

Documentation

No Xerox documentation was in evidence in the office.

Vendor support

The account representative for Xerox was often difficult to contact, but was helpful when reached.

Computer Center support required

Very little support has been necessary for this office.

Communications

Desired applications

The office staff wants to create speeches in Washington and message them electronically to the Savannah office. They have not had the opportunity to pursue this capability, and no provision has been made to install a terminal in Savannah.

Evaluation

Positive factors

The office has been satisfied with Xerox's equipment, applications, training and support. They particularly like the merge capabilities of the 860.

Negative factors

The Press Assistant complained several times about the difficulty of printing final copies. The proper paper must be loaded into the sheet feeder for each document. He would like to have one printer for the whole office, equipped with a sheet feeder that could handle several types of paper. Alternatively, he would like to have a laser printer in the office, that could print the desired letterhead on each document.

The Press Assistant is also unhappy about the lack of appropriate furniture on which to place his equipment. He stated that the Senator was very unhappy with the sloppy appearance created by terminals propped up by telephone books.

Another concern of the staff is whether their current office supply account is sufficient to purchase the necessary supplies. The office feels strongly that the office supply account should be increased to cover the more expensive supplies necessary to use office automation equipment.

Recommendations

The difficulties experienced by this office in printing documents should be addressed. Access to several printers, each loaded with at least two types of paper, would provide the print support necessary. This could be accomplished by linking the independent workstations to centralized printing facilities, or through a minicomputer configuration.

The Senate should investigate the need for increasing office supply allowances to accomodate office automation equipment.

Provisions should be made to provide adequate furniture for housing this equipment. Standard library tables and terminal tables that are currently available are not suitable for holding equipment configurations that consist of a screen and keyboard, a disk drive, and attached printer.

Report on the Office Automation Pilot
in Senator McClure's Office
July 1983

Installation

Equipment configuration

After several meetings with Digital Equipment Corporation's (DEC) Sales Representative, Senator McClure's office decided on stand-alone equipment because that option would give them more terminals. The installation includes 7 DECmate II microcomputers, each with a letter-quality printer attached. (The contract calls for the 7 DECmates to share 2 letter-quality printers and 2 high-speed matrix printers, and also includes one 5 MB Winchester disk.)

Installation method

No site survey or site preparation was necessary. Originally, DEC delivered 7 DECmate I's, because the DECmate II's would not be available until late April. DEC delivered the equipment and set it up in the office with no assistance from the Computer Center. The DECmate I's were replaced by DECmate II's in mid-April. The major differences between the two systems are the design of the screen and keyboard, and the software packages available for each.

Applications

Desired applications

- Word processing for ad hoc letters, floor statements, press releases, reports and memos. The Administrative Assistant is familiar with current technology and edits many of the office's documents.
- Office expense budgeting and tracking for projecting office expenses and salaries, based on past expenditures.
- Personnel histories to facilitate storing and tracking personnel records, including salary information and performance appraisals.
- Scheduling for the Senator's official Senate schedule, the Washington/Idaho schedule, and the Senator's personal and family schedules. The application should include the ability to: 1) enter all invitations, scheduled events, and appointment requests, both in Washington and in Idaho; 2) review specific requests for a particular area (county); 3) enter all past schedules of where the Senator has been, to determine what areas he has not visited recently; and 4) access the schedule from both the Washington and Boise offices.

- Communications between the Washington and Boise offices, and through the Computer Center's data network to CMS.

Actual application usage

- Word processing is being used extensively. The capability to merge lists with pre-stored text is used for creating letters.

  The main operator has typed onto the system the office's Procedural Guide, a lengthy document divided into several sections. In the legislative section of the office, Legislative Assistants type a rough draft of a document and pass their diskette to their Legislative Correspondent, who edits the document, corrects typos and improves the format. The diskettes are passed back and forth until a final document is prepared.

- Voucher preparation was not originally an application in which the office expressed an interest, but the office bookkeeper uses the system's "abbreviation" capability for this purpose. She stores blank forms in the system, and recalls them with one key-stroke. Once completed, the system's math capabilities can be used to perform simple arithmetic operations, such as figuring the amount spent on mileage, and totalling columns.

- Office expense budgeting and tracking -- The bookkeeper has been learning this application, but has found the process time-consuming. The only training provided is in the form of two manuals, which it appears must be read from cover to cover.

- Personnel histories -- This application requires a knowledge of the spreadsheet application, and so has not yet been attempted.

- Scheduling was a highly desired application for this office. However, no application is available on the DECmate II to address this need.

- Communications between Boise and Washington have been established. The three DECmate terminals with communications software and hardware can also be used to sign on to CMS, and to transfer files from CMS to the DECmate disk. The reverse capability has not been developed.

Training, Documentation and Support

Training

Initial training on the system was self-paced, using instructional diskettes and workbooks. One person in the office completed this form of the training, and then briefed everyone else in the office. Training for most of the staff on the basic word processing capabilities was performed onsite by a DEC instructor, and lasted for most of three days. The training combined lecture with hands-on exercises. It was effective, concise, and appeared to cover most of the skills needed for those in the office who were going to do only simple word processing. However, because not everyone who needed the training had access to a terminal and because certain staff members could not completely escape their regular duties during the training, not everyone on the staff received complete training.

Additional training in the advanced word processing capabilities was provided at DEC's New Carrollton facilities for four of Senator McClure's staff, as well as the Computer Center member of the OAP team assigned to the office. This training was also excellent, although about one-fourth of the class time involved applications that would never be used by the office.

Training for the spreadsheet application is available only through printed materials, and is quite time-consuming to complete. This training could probably be presented in one half-day instructor-led class.

Documentation

DEC's documentation is quite lengthy and somewhat difficult to use. However, the answers to most users' questions can generally be located with effort.

Vendor support

The office found reaching DEC's sales representative, who initially was their only contact, very difficult. However, once they started using the system, they found DEC's user hotline to be quite helpful, with immediate answers to almost all of their questions. Their greatest problems with support were in the Boise office. The DECmate II's are so new that none of DEC's staff in that region was familiar with them; nor were they aware of the existence of the contract with Senator McClure's office that included the Boise equipment.

Computer Center support required

Because of the simplicity of the equipment configuration and the staff's quick understanding of the applications, little support was required of Computer Center personnel.

Communications

Desired applications

The greatest use of the communications between Washington and Boise is to transfer information about the Senator's schedule back and forth, although press releases and other text files are also transferred. The office originally expressed a desire to transfer text created on the DECmates to CMS for subsequent letter creation, so that those letters could be integrated into their tracking and filing systems.

The DECmate in Boise is connected to the multiplexor already in the office for use with CMS. Problems with the DECmate communications software (inability to set the parity) caused initial delays. These were corrected by obtaining a pre-release version of improved software, and communications were established after some initial errors. These errors would certainly have been avoided had Computer Center personnel, both in Technical Control and in ESS, been more familiar with the equipment. Establishing the link between the two terminals is relatively simple, but because of the dataswitch configuration, must be initiated in Boise.

Computer Center support required

Because this type of communication had not previously been done through the Computer Center's dataswitch, a great deal of time was needed initially to test the viability of the connection, and to determine the best configuration. Additional problems were caused by DEC's software, which had been written for brand new machines. However, after the connection was firmly established and the procedures became routine for the office, little support was required.

Evaluation

Positive factors

The office is satisfied with the system's word processing capabilities, and uses them extensively. Included in the word processing software are list processing and math capabilites, also used by several people in the office. The press section of the office gave the OAP team an unsolicited testimonial about the system, saying that it has increased their productivity by at least 50%, that they could not imagine how they ever got along without it, and that all Senate staffers should have terminals on their desks. The bookkeeper has explored the system's capabilities extensively, and has become so comfortable with the system that she has given up her memory typewriter altogether.

DEC's communications software is flexible and simple to use. A menu provides simple access to a variety of communications modes, e.g., host-to-keyboard, keyboard-to-host, host-to-screen-to-diskette. Changing the terminal from a communicating mode to stand-alone and back to communicating is done easily.

Communications between Boise and Washington are working well, and are being used quite often, at least several times a day. Copies of the Senator's schedule are sent back and forth, and press releases are sent to Boise, where they are duplicated and distributed.

Up to now, the equipment has communicated with CMS only as a dumb terminal; in this mode, files can be transferred from CMS to the DECmate's diskette. However, the office seems satisfied with this and has not pursued its original desire to transfer files to CMS.

Negative factors

Lack of terminals is a consistent complaint. The Administrative Assistant is disappointed that he has not been able to use the system. He had planned to use his secretary's terminal, but it is never available because his secretary uses it almost all day. Several people in the office expressed the opinion that to make the system truly successful, every staff member needs to have a terminal.

The office is displeased that no support is available for their needs for tracking the Senator's schedule. This was one of the office's main goals in using the system. This application is not available on the DECmate II's. The office has very specific needs in this area, many of which would be widely applicable to Senate offices.

Procuring supplies for their DEC equipment is less convenient than for other types of equipment in the office. The Office Manager would like to have all of the supplies available through either the Computer Center or the Stationery Store.

Recommendations

Limit the types of equipment available to Senate offices. Two experiences with this office point toward this recommendation, both having to do with communications interfaces. Given a limited number of equipment types and configurations, the Computer Center Technical Control staff could develop the expertise necessary to support each type fully. This would have eliminated many of the problems the office encountered when the Boise terminal was installed and linked up. This office's desire to integrate the system with CMS is shared by other offices. Limiting the equipment configurations with which CMS would have to interact would make it possible to build a smooth, complete interface for all participating offices.

Provide adequate instruction for all applications. This office's bookkeeper spent many hours learning the spreadsheet application. The application itself is not that difficult, and the learner is quite adept and motivated. However, the instructional material is inadequate. The skills and information the bookkeeper needs to do her job could probably be learned with only a few hours of classroom instruction.

Provide an adequate number of terminals. The office has found that seven terminals are totally inadequate to fulfill their goals for office automation. A terminal for each member of the staff is required for the concept to work fully.

Provide scheduling capabilities designed expressly to meet the needs of the Senate. The Senate's scheduling needs are unique; it is improbable that any vendor will be able to provide off-the-shelf software that will come close to satisfying the Senate's requirements. This is a crucial function in every Senate office, and one that could be automated, given the appropriate needs analysis and design.

Report on the Office Automation Pilot
in Senator Stevens' Office
July 1983

Installation

Equipment configuration

The contract agreement between Senator Stevens' office and IBM called for five Displaywriters, two printers, five dual-disk drives, two sheet feeders for their printers, a magnetic card unit, and various software packages.

Installation method

The equipment was installed for Senator Stevens' office between February and May 1983. The office worked directly with the vendor for this installation; no support was required by Senate Computer Center staff during the installation period. The office also has two IBM Mag Card devices in the office -- one was provided in the contract, and one was purchased from Senator Stevens' office allowance.

Applications

- Word processing to type legislative mail, memos, and speeches. One of the secretaries creates a speech on the Displaywriter, and after all edits are completed for the speech, prints the speech on letter-size paper and index cards. The Administrative Assistant has indicated that printing a speech on the Displaywriter printers is quite easy, since only the printer specifications are changed for varying paper size and for double and triple spacing.
- Report writing capabilities to prepare office lists and unique reports for the Senator.

Training, Documentation, and Support

Training

The contract between IBM and the office specified that the vendor would provide initial training for four staff members from the office. Two staff members received some classroom instruction, but most of the training was in the form of self-instructional manuals and workbooks. The staff members found the materials easy to follow and the lessons clear and direct.

Documentation

The office received documentation when the equipment was installed. The quality of the materials is very good. IBM provided several different manuals to the staff, depending on which application was needed. The Administrative Assistant stated that the staff refers directly to the appropriate manual to perform a particular system function. The materials contain clear instructions and thoroughly explain every feature of the Displaywriter.

Vendor support

The vendor's application and hardware support has been adequate. When any piece of equipment is not operational, the vendor is onsite within an hour to repair the equipment. When the office has experienced difficulty with a particular application, IBM has been responsive, either over the phone from a hotline in Texas, or by visiting the office in person. The Administrative Assistant indicated that the support provided by the Texas hotline number is excellent. IBM prefers that all assistance calls be placed to the Texas number, which works well for this office.

Computer Center support required

Because the IBM Displaywriters are stand-alone units, requiring no special cabling or electrical hook-ups, the Computer Center had little involvement with the installation process.

Since the installation, the major assistance provided by Computer Center staff for this office has been in the area of communications. This office is extremely interested in the communications features of the Displaywriters, and staff from the Computer Center have dedicated many hours to this office's communications requests.

Communications

Desired applications

Senator Stevens' office developed a complex communications proposal in March 1983. This proposed configuration included two Displaywriters that would communicate with the Senate Computer Center for LEGIS/SCORPIO, and one Displaywriter that would communicate with the office's IBM System 6 printer. Outside the scope of the Office Automation Pilot, the office intended for two Apple IIe microcomputers to communicate through the Senate Computer Center to House Information Systems for electronic mail capabilities.

In compliance with Senate Computer Center direction, instead of communicating directly to the Senate Computer Center for updating the Senator's Newsletter Mail Files, the office started a test to send names and addresses to the mail files via the Correspondence Management System (CMS). Names and addresses were pulled from the Displaywriters and the System 6, reformatted by the office to comply with the mail file format, and sent to the mail file via CMS. The office started the test during the first week in May with assistance from an Educational Services and Support (ESS) representative. By the end of the week, the office had completed a sample test of the communications capability, and had encountered problems. If data is sent during the day at 1200 or 300 baud rates, the CMS system cannot always accept the complete file. If the same information is sent before 9:00 am at 300 or 1200 baud rates, the file transfer occurs smoothly. After 9:00 am, all data must be sent at 110 baud rate to ensure a successful file transfer. To enable the transfer to occur at the higher baud rates, the CMS vendor developed a special communications application, which is awaiting testing by the office.

Recently, the Administrative Assistant expressed interest in using the Displaywriters to key names and addresses directly into the Dialcom system. Once in the Dialcom system, the names and addresses would be checked against any incoming names for duplication. After this, the office would pull the names back to the Displaywriters in Displaywriter format, and the staff would type a response on the Displaywriters and send it to the constituents. Dialcom has agreed to put the names and addresses in two formats -- one for the Displaywriters and one for the mail file system. This agreement is contingent on the technical feasibility of formatting and transferring records back to the Displaywriters. Senator Stevens' office has scheduled a test with IBM and with Dialcom representatives.

In addition, the office is currently using the Apple IIe to communicate with outside services, such as Westlaw and UPI Wire Service.

Evaluation

Positive factors

The staff is satisfied with the IBM equipment, applications, and support. The office uses the Displaywriters extensively for word processing, an application which has worked well for them. Training new staff to use the equipment has been easily accomplished. Recently, one of their regular staff members left, and an intern needed only one week to begin producing letters and memos.

Negative factors

The Administrative Assistant mentioned that if the regular person assigned to the office from IBM was not available, finding a support person from the vendor was difficult. This has been resolved, and now an IBM representative is responsive to all of their calls.

One of the most frustrating experiences for the office so far has been the communications tasks, and coordinating all communications testing with Senate Computer Center personnel.

Recommendations

Senator Stevens' office has expressed strong concerns about fully testing all communications goals with Senate Computer Center personnel. In the future, it may be helpful to assign one person from the Computer Center to work directly with each office. Because of time constraints, it was not always possible for the same person from the Computer Center to support this office's communications needs.

A meeting between representatives from the Computer Center and the office may be advisable before the staff defines their communications goals. Because some of their goals were not technically feasible and others required policy clarification before they could be implemented, the office became frustrated with the length of time it took to complete their communications projects. Such an assessment meeting would provide a clear picture of the policy and technical limitations involved in establishing communications among different types of equipment, and could help offices define their communications goals. Further clarification of communications policies may be necessary as Senate offices become more involved in the possibilities offered by this capability.

Report on the Office Automation Pilot
in Senator Warner's Office
July 1983

Installation of equipment

Equipment configuration

The contractual agreement between Senator Warner's office and Wang provided four CRT stations, one with telecommunicating features, and two daisy-wheel printers. The contract included only one twin sheet feeder and envelope feeder. Because one of each of these attachments is needed for each of the two printers, this was noted as an error. Wang was supposed to have supplied an extra set of attachments, but has not done so. All terminals are part of the OIS 115-2 configuration, with a central CPU and Master 8.4 MB disk.

Installation method

See Huddleston Report.

Applications

Desired applications

- Word processing for ad hoc letters, floor statements, press releases, speeches, reports and memos.
- Voucher preparation.
- Office expense budgeting and tracking.
- Office expense accounting.
- Scheduling of 30 - 40 invitation and time commitments per day.

Actual application usage

See Huddleston report.

Training, Documentation and Support

Training, documentation and vendor support

See Huddleston Report.

Computer Center support required

In addition to coordinating equipment installation, staff training, and supply procurement, Senate Computer Center staff provided assistance in establishing procedures for indexing and filing the office's documents. A CMS Representative helped the staff make use of the Senate's Indexing system instead of creating a separate Wang filing system. This assistance saved the office the time involved in rekeying information being stored through the CMS Data function.

Communications

Desired applications: none

Evaluation

Positive factors

The office is satisfied with the ease with which staff members learned to use basic word processing features for press releases, speeches, floor statements and letters. The merge capabilities for invitations and thank you's and the dual column capability for printing labels have been very useful.

Negative factors

The office has been dissatisfied with the reliability of the Wang printer, especially with the sheet feeder, which has caused so many problems that the office had seriously considered no longer using their Wang equipment.

Major CPU problems caused the entire system to be unavailable for almost two days. The staff was frustrated with the lack of training on dual column print and other software applications. The lead operator is dis satisified with the inability to retrieve a file after issuing the print command.

Recommendations

Experience with this office on filing and indexing made it apparent that assistance from ESS is essential to help offices integrate their automated functions to avoid fragmentation and duplication of effort.

Back-up printing facilities are essential to enable an office to print vital, time-critical documents when standard printing facilities are unavailable.

APPENDIX E

MEMORANDUM TO JOHN SWEARINGEN FROM RONALD HICKS SUMMARIZING A CONVERSATION WITH DAVE FRANKLIN REGARDING PRODUCTIVITY IMPROVEMENTS AT THE IBM MANUFACTURING PLANT IN AUSTIN, TEXAS, RESULTING FROM OFFICE AUTOMATION EQUIPMENT

To: John Swearingen September 21, 1983

From: Ronald Hicks

Subject: Notes taken in video-conference with Dave Franklin, Director of Administrative Services at the IBM Manufacturing Plant in Austin, Texas, on September 21, 1983

The IBM manufacturing plant in Austin, Texas, recently converted to Office Automation (OA) equipment. Previously, less advanced magnetic media, such as Memory Typewriters, System/6's, and MCST's (Magnetic Card Selectric Typewriters) had been in use.

Prior to the conversion to Office Automation equipment, the Austin Plant had a 16:1 principal:secretary ratio. This factor had been in place for a long time, and was a "hard number." At the end of the first step of OA implementation they had achieved a ratio of 18 or 19:1. (Note: their first step was with secretaries -- to get them past the "future shock." Their next step will be to "tie the principals in tighter." They expect the secretaries to be of assistance in bringing OA to the principals.)

The managers of the conversion began it with a commitment to their superiors of a 20% productivity improvement because they were confident the savings were there. And these were real savings that the Comptroller could see as changes to the budget, not soft or "intellectual" dollars. As Mr. Franklin put it, they "backed into it," by asserting to management that they would manage with 20% less. In dollar terms, they projected savings of $6.4 million over five years, and they believe they actually realized such savings within two and a half or three years.

Another measure of success was in the increase of positive answers to the question "How do you like your job?" in their annual questionnaire. There was a 20% increase in positive answers among principals, and almost as much among secretaries. Principals noted that quality of work and turn-around time had improved, and that secretaries could do more.

He stressed the need to take a "Management By Objectives" approach with managers. It is necessary to get them to agree "up front" to one of two things in exchange for OA equipment: either: (1) a proportional reduction in staff, or, if they balk at that, (2) a proportional increase in production. Principals should be allowed to negotiate their own deals, but some advance commitment is essential, or Parkinson's law will take over. (This is a discouraging reminder of the difference between a collegial body and a manufacturing organization with a hierarchical structure. Such agreements seem totally alien to the Senate environment. It is unlikely that we'll ever do better than unprovable justifications based on qualitative improvements, cost avoidance, and increased job satisfaction.)

Observations on productivity increases for specific applications.

1. Productivity of OA vs. less advanced magnetic media, such as Memory Typewriters was estimated at 200%, and productivity of OA vs. manual typing at 300%.

2. Previously, overtime ran 10%. Now it runs only 4 to 5%. (Note: the Senate doesn't pay overtime.)

3. Due to reductions in internal mail, the plant mail room reduced staff from 5 to 4 persons, and has the evening mail ready to go out by 4:15 P.M. Previously, they were able to make it by 5:00 P.M. only with furious effort, and frequently ran over to 5:15. In addition, Mr. Franklin said that the time saved through transfer of documents electronically rather than by messenger is also important.

Other points.

1. They provided five different calendar management applications, because different people had different needs and desires. (He had mentioned earlier that the system was designed so that secretaries would like it and so that their creative energies and talents would be tapped.)

2. Conference room scheduling is done on the system. Other secretaries can look at it, which has resulted in negotiations they didn't have before. (Note: Such a function in the Senate would have to be on a central system before other offices could look at it. A Rules Committee mini-computer would not provide Senate-wide access.)

3. They publish a newsletter through which users share the short-cuts they develop. It is also a way of providing recognition to enthusiastic, innovative users. (This is an idea the Senate Computer Center could consider for their publication "Currents.")

(8245-83121-1900)

APPENDIX F

"JUSTIFYING OFFICE AUTOMATION"

BY WILLIAM J. BOCZANY

FROM THE JOURNAL OF SYSTEMS MANAGEMENT

JULY, 1983

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Article shows how to measure the cost/benefits of office automation before implementation.

S-83 07708

Justifying Office Automation

BY WILLIAM J. BOCZANY

Perhaps the most difficult and frustrating aspect of office automation is the cost justification exercise. By its nature justification implies measurement—that is adding up the inputs and comparing these inputs to the corresponding outputs. Hopefully the results always show that we have gained more in productivity than what we lost in dollars.

As of this writing there hasn't been any breakthrough in determining *what* the distinct products of the office are, let alone a way to *measure* the variability of output of these products over time. For these reasons cost justification has been a particularly elusive exercise.

While being aware of these problems does help to understand the magnitude of the cost/benefit analysis it nevertheless does not eliminate the need for cost justification. Concerted efforts must still be made to justify expenditures for office automation systems with the best tools we have available at the present time.

Rationing of Resources

Imagine that you were the owner of a fairly large company. You built the business from scratch with all your savings and hard work over the years resulting in this successful enterprise. This company that you have built also has a fairly sophisticated industrial engineering function. One day an engineer comes in and says "Boss, I just found out about this new digital widgetizer that can really save us money. If we spend $50,000 for it we can produce twice the number of widgets we are now producing in the same amount of time and it will only cost us 25% more. I have all the figures worked out and here is all the information you need that documents all the savings." Five minutes later, you the newly appointed Office Automation Manager walks in and says "Boss, I just discovered the greatest thing since sliced bread. It's called a word processor and it really looks like we can substantially increase productivity because we sure go through alot of paper around here and it's growing like crazy. I can't really say how much money we're going to save or even if we are going to save any money, but we can get four for $50,000."

If you were the boss, capital money was tight and you had to make the decision between the two competing projects briefly outlined above, which one would you choose? It is fairly obvious which one you would choose. While admittedly somewhat dramatic the point of the above scenario is that there is such a thing as limited resources in most corporations. While there are many projects competing for funding, only a few actually make it. With rationing of resources only those projects that can document and reasonably substantiate a decent return will get funded.

Economic Conditions

No one has to be reminded of the present economic conditions. With this in mind it is even more important that project proposals be well documented as to expected benefit. Many companies are finding it difficult to maintain operations. How can you expect management to go along with expansion when difficulty abounds in just keeping what you now have?

Journal of systems management v. 34
July 1983 p 15-19

P15-19

W. J. BOCZANY
Mr. Boczany is currently with The Upjohn Company in Kalamazoo, Michigan, where he is employed as a systems analyst. His interests are in the areas of office productivity improvement and office automation. Mr. Boczany holds a bachelor's degree in industrial engineering from the University of Dayton and an M.B.A. in finance from Western Michigan University. He is a member of the West Michigan Chapter of ASM.

Good Business Practice

It is just good business sense to require adequate cost justification on office automation projects. While your pet project in office automation is important to you, from the viewpoint of management it is just another project proposal that gets put on the stack with everyone else. In order for you to increase your odds for funding the proposal must be at least as good as and preferably better than the rest of the paper on the stack. All of the others will have quite extensive justification particularly those that come out of the industrial engineering types. You cannot afford not to substantiate your project as best as you can. This means showing what it is going to cost and what the expected return will be. If management has to look at one thing on deciding the fate of the proposal you can bet that the financial factors will get the most attention. Quite simply what is it going to cost and what will it return?

O/A Measurement Criteria

In a previous article the potential benefits of O/A (or any productivity improvement project for that matter) were discussed. It was stated that improvement can be measured in three ways: doing things faster, doing things better, or doing things at less overall cost.[1] In all cases we are increasing the ratio of output to input which is the basis for productivity improvement. The problem comes about because all three of these factors are not equally measurable. While it can be argued that doing things faster and doing things at less cost are objective and quantifiable the same cannot be said for quality. Quality is a subjective determinant and is a function of the bias of the evaluator. It is extremely difficult to put a dollar value on what improved quality means to a business. Should a company for example spend $5,000 per worker for improved quality or would $1,000 be a more palatable figure?

It is also usually difficult to say that the installation of office automation equipment will allow an organization to do work at less direct overall cost. Since O/A equipment costs money and a big chunk of it is usually spent up front not only for the purchase of the equipment but also for site preparation and ongoing training, maintenance, and administrative expense etc., the organization usually experiences a large increase in costs. A reduction in overall costs is usually more of a result of doing things more efficiently which in turn allows more work to be doing in a given amount of time.

It seems that doing things more efficiently (i.e., faster) then is the closest we have come at present to being able to measure the benefits of office automation technology. (Perhaps this is one of the reasons for word processing being the first area of office automation endeavors by many companies, the fact that paper can be processed faster!) If we can save "X" hours a day using the equipment and have wisely reinvested the time saved we have the equivalent of another person working "X" hours per day. This is directly transferable into dollars per hour saved and is also something that management can understand.

Given the above, one of the next questions that needs to be asked is how much are we willing to pay up front for $1 of potential savings in the future? While each company has to decide this for themselves, an idea of what it will actually cost can be approximated by means of a pre-implementation cost justification exercise. In this analysis potential savings are estimated and expenditures are adjusted to these savings to assure a minimum project rate of return.

Pre-Implementation Cost Justification for O/A

Two important questions should be addressed by any company contemplating the acquisition of Office Automation equipment. These two questions in proper sequence are: 1. For whom should the equipment be purchased? and 2. What kind of equipment should be purchased?

While many companies will not actually admit it their actions show that they view Office Automation and Word Processing synonomously. In many instances Word Processing equipment is the only Office Automation equipment installed. A closer analysis, however, by means of an Office Automation needs analysis may indicate that the dollars spent for word processing could have been spent more efficiently by buying a different type of equipment for different employees.

Outlined below are two sample cost justifications for both clerical and professional staff. While several assumptions have been made throughout the examples it is believed that all the assumptions are reasonable and conservative.

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[1] W. J. Boczany, "Objections to Objective Costing," *Journal of Systems Management*, Vol. 32, No. 1, 1981, pp. 15-17.

Clerical Staff

Many companies blindly replace $1,000 IBM Selectric typewriters with $10,000-$20,000 word processors with the implication that the secretary is more productive and therefore the expense is justified. While management may feel comfortable with that assessment all too often the purchase is *not* warranted. No matter how much we may think the purchase is justified we never know for sure until we take the time to analyse some of the relevent numbers.

For the sake of example, assume that we have a clerical person who earns $12,000 per year or roughly $6 per hour. Assume further that the person is a typical secretary and types on the average 20% of the available time. If we assume a generous "given" of a word processor increasing output by means of a 50% time savings, we have potentially saved the secretary 10% overall (50% improvement × 20% typing = 10% improvement). To equate that to dollars we have created a potential of time that is worth $1200. An important point is that it has not yet been a realized $1200 savings until we find and until the person does additional work that could not have been accomplished previously. Assume our clerical person is very conscientious and that we do in fact achieve our realized $1200 savings. Equating that back to what we have spent for the equipment, say $12,000 for simplicity, we have generated a $1200 savings on a $12,000 investment. To pay back our $12,000 investment so that in subsequent years we have recovered our costs and are realizing a net gain will take ten years. (Financial people will tell you even longer based on the net present value method of measuring outgo and income, but we wish to keep things somewhat elementary for the purpose of this example.) No company in their right financial mind would acquire an asset that takes ten years to pay for itself. Companies may, however, look favorably upon investments that take three years or less to pay back. Naturally, the shorter the amount of time the better. By sort of a reverse logic then a 10% increase in typing productivity warrants a corresponding investment of no more than $3600. A $3600 (or less) word processor would be a good buy considering the specific amount of salary, typing time percentage, and the assumed improvement potential in this example. For other assumptions the outcome would be different.

If you ask the clerical person if the word processor purchased at a cost of $12,000-$20,000 was an improvement over the Selectric you can bet that 9 out of 10 would say yes. What is often a financial disaster may be an operational success. The important question is: Were the hard dollars invested yesterday worth the soft dollar returns we are receiving today and over the next two years?

Professional Staff

A similar analysis can be done for a professional worker. Assume the professional earns $40,000 a year. Assume we can buy a microcomputer for $5,000 which would be a fairly adequate amount to provide a system with adequate software, printer, and other peripherals. Further assume that we can also improve the person's productivity by 10%. In other words out of a 40 hour week we have generated the equivalent of 4 additional hours because of technology. Since the microcomputer is not limited to just word processing the professional can use it for doing spreadsheet work, graphics, records processing, filing, electronic mail, data base lookup, etc. In other words it is a universal tool that can be applied to more aspects of the professional's job than a word processor can be applied to the secretary's job. For this reason the potential for realized savings is greater for a professional than it is for the clerical person.

Getting back to the analysis then, if we assume a 10% increase in productivity we have again generated a potential of saved time equivalent to $4,000. If we look at our return on our investment compared to the initial cost the following results: $5,000/$4,000 - 1.25 years. It is easy to see where the cost justification lies. The professional is the better investment in the above two examples because 1. the professional's time is worth more (at least financially!) and 2. the equipment needed to enhance his productivity is substantially lower in cost.

While it is realized that the above figures can change, the purpose was to provide a framework for assessing the worth of office automation investments.

By no means am I advocating that professionals and not secretaries need automated office tools. The intent is to establish where the first dollar of office automation money should be spent and to relate potential savings to actual costs to help assure project success. Office Automation dollars should be spent where you get the most return for your money. As subsequent dollars become available and are justified money should be invested in other areas; but those first rationed dollars are spent obtaining the greatest return (maximum leverage). Subsequent dollars should be spent until the level is reached where return is equal to the minimum rate of return as specified by the company.

Factoring in Better Quality

In the previous example of the clerical justification exercise it was shown that a $12,000 per year secretary who types 20% of the time could justify a $3600 word processor based on time savings. Some may object, however, and say not only was there an increase in efficiency but also in quality as a result of the word processor. As mentioned earlier, however, quality is a subjective factor which is difficult to put a dollar value on. Quality can be factored into the analysis by asking how much is management willing to pay for better quality? Would they be willing to pay an extra $1000? If so a word processor can be justified. If they are willing to pay $2000 for increased quality a $5600 word processor can be justified. I don't think however, that management would be willing to spend $8400 (the difference between a $12,000 word processor and a $3600 word processor) for a $12,000 per year employee in order to increase quality. Management must decide exactly where in the range it is willing to spend for increased quality. Once a figure is determined it can then be factored into the analysis.

Discounted Savings

If given the choice would you rather have $50,000 today or $50.000 twenty years from now? It shouldn't make any difference since $50,000 is $50,000, right? Wrong! Everyone in business should know that money has a time value and also a risk value. How do you know that I will be around twenty years from now to give you that $50,000 if you chose that option? Everyone in business should know that money spent today is not equatable to the absolute value of the same sum at some time in the future. Future savings therefore must be discounted to allow for the time value of money. For this reason it is not totally accurate to equate spending $12,000 for a word processor today to be justified by a $4,000 savings for each of the next three years. That $4,000 savings must be discounted to be equatable to present dollars. Depending on the discount rate we may even find that our $12,000 investment only pays back $10,000 in those next three years.

In addition to discounting for the time value of money, we must also discount for the risk value of money. While we may have outlined a potential savings of "X" dollars our realized savings may be considerably less depending on how much of our potential dollars are actually realized. As part of our analysis we may have to say that we are not even receiving a $10,000 savings (as indicated above) but an $8,000 savings when we apply a subjective risk factor of 20% to our investment. Stated another way: $1 spent for hardware today would have to return at least $1.25 in the future to compensate for a 20% risk factor.

Putting It All Together

The following is an outline of a six step process to be used in justifying the purchase of Office Automation equipment. A summary justification example has been included in Figure 1 to help understand the process.

1. *Determine the appropriate "productivity improvement factor" to be used for the particular justification.*

   In the case of the clerical justification, 50% typing improvement potential was indicated. In the case of the professional a 10% overall improvement factor was used. These factors can be obtained by doing internal studies to determine an "average" time savings factor for your particular organization or some of the published literature factors may be used. Since the factors can have a wide range it is important to use a factor that is reasonable for your particular organization and most importantly one that is credible to your management.

2. *Perform a pre-implementation cost/benefit analysis to determine gross savings.*

   An analysis of what expected benefits for a system should be can be roughly determined by doing a pre-implementation cost/benefit analysis similar to the sample included for a clerical and professional in a previous section of this article.

   An enhanced analysis can use different productivity improvement assumptions to look at the change in potential savings versus an increase in the savings factor assumption. A reasonable savings factor that provides the largest return should be selected to be used in your justification.

3. *Discount the savings determined in step 2 to obtain net savings.*

   Savings should be discounted as indicated in a previous section to allow for the risk factor between potential and realized savings. Savings should also be discounted to allow for the time value of money. This discount for the time value of money can be done using financial analysis techniques for more accurate results or can be a subjective determination for the purpose of a rough analysis. Discounted savings will be more believable by management and should provide a more accurate gauge as to true cost benefit.

4. *Determine that amount that management is willing to spend for an improvement in quality.*

   With an idea of how much is expected to be saved calculated from the above steps, discounting these savings for both a time value and a risk factor of money and knowing the expected cost of equipment the amount of money that will be paid for increased quality of operations can be determined. The cost of the proposed equipment less the discounted benefits will be a rough idea of what you will actually be

SUMMARY JUSTIFICATION EXAMPLE

Assumptions

1. **Salary = $12,000 per year**
2. **Savings factor = 10%**
3. **Payback required = 3 years or less**
4. **Discount for time value of money = 10%**
5. **Discount for risk factor of savings = 20%**
6. **Amount management willing to spend for increased quality for this position = $1,000**

Calculations

A. Application of savings factor to salary to determine annual savings: 10% × $12,000 = $1,200

B. Determination of 3 year gross savings:
[payback period × annual savings] 3 × $1,200 = $3,600

C. Application of discounts:
1. Time value of money – 10%
2. Risk value of money – 20%
Total Discounts – 30% × $3,600 = ($1,080)

D. Net savings = $2,520

E. Amount management willing to pay increased quality = $1,000

F. Justified dollars to be spent on equipment = $3,520

The $3,520 represents the maximum amount of money that should be spent on office automation equipment, for the given assumtions, in order to justify a 10% time savings with a $1,000 quality increase factor and a three year payback.

Figure 1

paying for an increase in quality. This figure can be adjusted up or down to help determine how much should be expended for equipment.

5. *Determine the amount that is justified for equipment expenditures.*

   By completing step 1 through 4 above you have determined the maximum amount of money that can be spent for equipment while still maintaining a decent return on that investment. The challenge is to now determine what is the best value (the equipment with the best price/performance) of the available equipment. This, however, is a separate subject in itself and will not be discussed in this article.

6. *Prepare the Proposal and Justification.*

   At this point the proposal for office automation equipment can be written with a good idea of what expected savings will be and a good idea of the maximum dollars that can be spent in order to achieve those savings. In summary you are in a good competitive position for eventual project approval.

Conclusion

It is easy to say that the benefits of Office Automation must be taken on faith alone and that they cannot be justified. While this is certainly one approach to the problem, it is not a very viable one. Management is used to seeing proposals where the costs and benefits are more clearly defined. Industrial Engineering and Financial Analysis are two areas that have employed these tools successfully and have set the standard for more quantitative project evaluation. If Office Automation is to get off the ground its promoters must begin to speak the justification language that is well known to management. They must begin to see themselves as competitors for scarce corporate resources and they must strive to apply the same or similar justification rules to their projects as any other corporate project must do.

How to measure cost/benefits is admittedly a problem since there are no universally accepted standards as to the products of the office let alone the measurement of these products. There are, however, methods to estimate benefits based on time savings. These savings in time can be used to calculate an approximate level of expenditures to help assure the required rate of return. Like any other corporate project investment return should be commensurate with the dollars placed at risk. The plan outlined above while not the perfect solution does offer some means of quantifying the benefits of Office Automation. *Most* importantly it provides an opportunity to target results *before* the investment is made and to plan input of resources so that realistic results can be achieved.

ejsm

APPENDIX G

MEMORANDUM TO JOHN SWEARINGEN FROM HARDY CALLCOTT REGARDING PRODUCTIVITY IMPROVEMENTS

Memorandum

To: John Swearingen

From: Hardy Callcott

Re: Office Automation Cost Justifications

Attached are breakdowns by office for the pilot project. Wherever possible, all the terminals in each office have been listed, along with the job title of its primary user(s) and secondary beneficiaries. Next to the titles of the users are estimated salary figures (from the Senate Handbook), subjective estimations of productivity increases, and finally the purchase which these increases would justify, according to the Honeywell model for cost justification. I worked with Ron, Tony, and their Computer Center staff contacts for the offices they oversaw. No-one was especially thrilled with the methodology we were using and Tony in particular had serious reservations.

I have several observations from the surveys.
1. The gains claimed by the offices in our contacts with them have frequently been so unrealistic (50%, 100%) that they had to be discounted. This may make asking the offices to fill out similar forms to the one we used an unprofitable exercise.
2. Judging the justification for an entire office cannot be done simply by adding the value for each of the terminals. Many offices had some terminals that were over-justified, and others that were not fully justified. The process of justification must occur on a terminal by terminal basis.
3. Tony makes the good point that when evaluating the value of a terminal, one must take into account the cost of the printer associated with it as well. An office needs a printer for every two to three terminals, and suffers if it has less.
4. As one of the articles on justification noted, just because someone really likes having a terminal does not mean that it is cost-effective for them to have one. This most often occurs with a low-level person who must do a few difficult typing tasks which are easier with a word-processor, but who would not spend most of their time using the terminal.

Now for some generalizations about the results.
1. Despite the requests of several offices and the inclinations of some staff, I cannot see a justification for putting a terminal on the desk of everyone in the Senate or everyone in a member's office. There are in any office, people for whom a terminal is not cost-effective. Of course, we have yet to test such a system.
2. For secretaries who type most of the time, a terminal is almost always justifiable.
3. For a professional with computer background or an eagerness to learn, a computer is almost always justified. The highest justification figures come for AA's who really want the terminal, and press secretaries, with legislative staff slightly lower, but still usually justifiable.
4. For a professional who is satisfied without a computer and has one forced on them by a computer enthusiast higher in the office, the results are predictably bad.

5. For some Senate office functions, for instance receptionists who do not type much (an application tried in one office), a terminal is not currently justified.
6. Despite the fact that a great many offices have expressed dissatisfaction with their current scheduling and appointments system, the benefits of giving a terminal to scheduling secretaries were disappointing.
7. In the one office where a Senator was actually given a terminal, it seems unlikely that he used it enough to justify the expense.

I am also attaching A) the cost-benefit analysis explaining the Kahn equation, which you have seen, and which might be useful if you decide to issue a report on the pilot project, B) the blank cost-benefit worksheet, C) a one-page sheet explaining the differences between the Honeywell equation and the Upjohn equation from The Journal of Systems Management, which you have not seen, and D) the TV stuff, which you have seen.

Thanks for everything this summer. I'll keep in touch

Handy

COST-BENEFIT ANALYSIS OF SENATE OFFICE AUTOMATION

The federal government has not yet made available a system for calculating the estimated benefits of office automation. Honeywell Inc.'s Michael A. Kahn has, however, developed such an equation. The Kahn equation, using present value calculations common to all businesses, relates the cost of automation to productivity increases and the salaries of the personnel whose productivity would be affected. (The assumptions used in the equation are listed below. They are and were intended to be conservative.) The equation is as follows:

$$\sum_{i=1}^{n=5} \frac{(\text{salary+ overhead})(\text{annual salary increase})^{n-1}(\text{productivity increase})}{(\text{1- federal funds rate})^{n-1}} = \text{justified purchase price}$$

Using the assumptions, the equation becomes:

$$\sum_{i=1}^{n=5} (1.25\ s)(1.04)^{n-1}(n=1:\ 0.5\ p;\ n=2\text{-}5:\ p)(0.9)^{n-1} = \text{justified purchase price}$$

where "s" is the salary of the person whose productivity will be affected, and "p" is the anticipated productivity increase. This equation produces a table:

Productivity Increase	Multiplier
50%	2.24
25%	1.12
20%	.90
15%	.67
10%	.45
5%	.22
1%	.04

The most which an office is justified in spending to purchase automation for any individual is that person's annual salary multiplied times the multiplier associated with the productivity increase which automation would provide that individual. For example, a 10% increase in productivity for five years for someone making $20,000 a year would justify an expenditure of ($20,000 times .45) or $9000. (A similar table, also generated by a present value calculation, tells what annual leasing price is justified.)

Of course, it is difficult to measure productivity in a scientific way in an office environment. For a secretary who must correct minor mistakes in a letter three times before the letter is sent, word processing can cut the total time spent on that letter by almost 75%. In general, it is reasonable to believe that automation will give a secretary whose primary duty is typing an overall productivity increase of 20%, with the professionals whom that secretary services getting productivity increases of 5% solely from the secretary's improvement. A professional who spends most of his or her time writing (perhaps a press secretary, a legislative assistant, or a legislative correspondent) could expect a 10% productivity increase from automation.

Some examples suggested by the Rules Committee pilot project will illustrate these points. (Hypothetical salary figures are from the guidelines in the Senate Handbook.)

1. If the productivity of a personal secretary (making $27,000 per year) was increased by 20%, and this in turn increased by 5% the productivity of an administrative assistant (making $50,000), this would justify an investment of $35,300 in automation (or an annual lease of $8,610).

2. If the productivity of a secretary ($16,000) in a legislative office increased by 20%, and in turn this increased by 5% the productivity of a legislative director ($43,000), a legislative assistant ($30,000), and a staff assistant ($15,000), this would justify an expenditure of $33,760 (or an annual lease of $8,234).

3. If one unit increased by 10% the productivity of both a press secretary ($35,000) and an assistant press secretary ($21,000), this would justify a purchase at $25,200, or a lease at $6,146.

4. If an appointments secretary ($21,000) increased productivity by 20%, it would justify a purchase at $18,900, or a lease at $4,610.

5. If terminal on the desk of a legislative assistant ($30,000) increased his productivity by 10%, this would justify a $13,500 purchase, or a $3,293 lease. (Not even considering the productivity effect this might have on his secrtary or his legislative director.)

The Kahn assumptions are: annual salary increase: 4%; salary overhead: 25% of salary; equipment life: 5 years; value of equipment at end of life: 0; cost of money (federal funds rate): 10% per year; and of course no investment or depreciation tax credits. They also assume that only half of the anticipated productivity increase will be realized in the first year of use, with the full benefits being realized in each of the next four years.

COST-BENEFIT WORKSHEET

Office: Senator Bradley

EMPLOYEE FUNCTION	PRODUCTIVITY INCREASE	SALARY RANGE	BENEFIT
A. PRIMARY USERS			
1. Full time keyboarder			
2. Keyboarding main duty			
B. Appointments Secretary	5%	$21,000	$ 4,620
E. Legislative Secretary	15-20%	$16,000	$10,720
C. Staff Assistant	15-20%	$15,000	$10,050
3. Professional			
A. Executive Assistant (Office manager)	5%	$36,000	$ 7,920
D. Press Assistant	10%	$21,000	$ 9,450
II. SECONDARY BENEFICIARIES			
4. Professional supported by 1. or 2. above			
B. Appointments Secretary	5%	$21,000	$ 4,620
E. Legislative staff	5%	$30,000	$ 6,600

COST-BENEFIT WORKSHEET

Office: Senator D'Amato

EMPLOYEE FUNCTION	PRODUCTIVITY INCREASE	SALARY RANGE	BENEFIT
A. PRIMARY USERS			
1. Full time keyboarder			
A. Legislative Secretary	25%	$16,000	$17,920
2. Keyboarding main duty			
B. Personal Secretary	20%	$27,000	$24,300
C. Appointments Secretary	20%	$21,000	$18,900
3. Professional			
A. Legislative Assistant	10%	$30,000	$13,500
II. SECONDARY BENEFICIARIES			
4. Professional supported by 1. or 2. above			
B. Administrative Director	5%	$50,000	$11,000
A. Legislative Director	5%	$43,000	$ 9,460

COST-BENEFIT WORKSHEET

Office: Senator DeConcini

EMPLOYEE FUNCTION	PRODUCTIVITY INCREASE	SALARY RANGE	BENEFIT
A. PRIMARY USERS			
1. Full time keyboarder			
C. Legislative Secretary	15%	$16,000	$10,720
D. Personal Secretary	20%	$27,000	$24,300
2. Keyboarding main duty			
E. Secretary, press	15%	$16,000	$10,720
3. Professional			
A. Office Manager	10%	$35,000	$15,750
B. Legislative Director	10%	$43,000	$19,350
II. SECONDARY BENEFICIARIES			
4. Professional supported by 1. or 2. above			
E. Press person	5%	$35,000	$ 7,700
F. Legislative Aides	5%	$30,000	$ 6,600

COST-BENEFIT WORKSHEET

Office: Senator Dole

EMPLOYEE FUNCTION	PRODUCTIVITY INCREASE	SALARY RANGE	BENEFIT
A. PRIMARY USERS			
1. Full time keyboarder			
2. Keyboarding main duty			
B. Secretary	15%	$16,000	$10,720
C. Appointments Secretary	5%	$21,000	$ 4,620
D. Personal Secretary	LT.5%	$27,000	$ 0
3. Professional			
A. Executive Assistant	20%	$35,000	$31,500
II. SECONDARY BENEFICIARIES			
4. Professional supported by 1. or 2. above			

COST-BENEFIT WORKSHEET

Office: Senator Kennedy

EMPLOYEE FUNCTION	PRODUCTIVITY INCREASE	SALARY RANGE	BENEFIT
A. PRIMARY USERS			
1. Full time keyboarder			
2. Keyboarding main duty			
C. Legislative Secretary	15%	$16,000	$10,720
D. Press Assistant	15%	$21,000	$14,070
3. Professional			
A. Office Manager	10%	$24,000	$10,800
B. Production Manager	10%	$25,000	$11,250
II. SECONDARY BENEFICIARIES			
4. Professional supported by 1. or 2. above			
D. Press Secretary	5%	$35,000	$ 7,700
C. Legislative Director	5%	$43,000	$ 9,460

COST-BENEFIT WORKSHEET

Office: Senator Humphrey

EMPLOYEE FUNCTION	PRODUCTIVITY INCREASE	SALARY RANGE	BENEFIT
A. PRIMARY USERS			
1. Full time keyboarder			
2. Keyboarding main duty			
D. Personal Secretary to Senator Humphrey	10%	$27,000	$12,150
E. Receptionists (2)	5-10%	$12,000 (ea)	$ 5,280 (total
3. Professional			
A. Administrative Assistant	25%	$50,000	$56,000
B. Senator	5%	$69,000	$15,180
C. Assistant AA	10%	$30,000	$13,500
K. Legislative aides (10)	10%	$15,000/ 30,000	$15,000 ea
II. SECONDARY BENEFICIARIES			
4. Professional supported by 1. or 2. above			

COST-BENEFIT WORKSHEET

Office: Senator Mattingley

EMPLOYEE FUNCTION	PRODUCTIVITY INCREASE	SALARY RANGE	BENEFIT
A. PRIMARY USERS			
1. Full time keyboarder			
2. Keyboarding main duty			
E. Personal Secretary	10%	$27,000	$12,150
3. Professional			
A. Asst. Press Secretary	20%	$22,000	$18,900
B. Press Secretary	15%	$35,000	$23,450
C. Legislative Assistant	5-10%	$30,000	$ 6,600
D. Legislative Assistant	5-10%	$30,000	$ 6,600
II. SECONDARY BENEFICIARIES			
4. Professional supported by 1. or 2. above			

COST-BENEFIT WORKSHEET

Office: Senator McClure

EMPLOYEE FUNCTION	PRODUCTIVITY INCREASE	SALARY RANGE	BENEFIT
A. PRIMARY USERS			
1. Full time keyboarder			
C. Staff Assistant	15%	$15,000	$10,050
2. Keyboarding main duty			
D. Personal Secretary	20%	$27,000	$24,300
E. State Office Staff Assistant	10%	$15,000	$ 6,750
3. Professional			
A. Press Secretary	25%	$35,000	$39,200
B. Assistant Press Secretary	25%	$21,000	$23,520
II. SECONDARY BENEFICIARIES			
4. Professional supported by 1. or 2. above			
D. Administrative Asisstant	5%	$50,000	$11,000

COST-BENEFIT WORKSHEET

Office: Senator Stevens

EMPLOYEE FUNCTION	PRODUCTIVITY INCREASE	SALARY RANGE	BENEFIT
A. PRIMARY USERS			
1. Full time keyboarder			
C. Mail Support Secretary	20%	$16,000	$14,400
2. Keyboarding main duty			
A. Legislative Correspondent	15%	$17,000	$11,390
B. Legislative Secretary/Press	15%	$16,000	$10,720
D. Legislative Secretary	15%	$16,000	$10,720
3. Professional			
II. SECONDARY BENEFICIARIES			
4. Professional supported by 1. or 2. above			
B. Administrative Assistant	5%	$50,000	$11,000
A/D Chief Legislative Assistant	5%	$30,000	$ 6,600

APPENDIX H

SENATE COMPUTER CENTER RECOMMENDATIONS

LARRY E. SMITH
SERGEANT AT ARMS

PHONE
202-224-2341

United States Senate
OFFICE OF THE SERGEANT AT ARMS
ROOM S-321, THE CAPITOL BUILDING
WASHINGTON, D.C. 20510

October 27, 1983

Honorable Charles McC. Mathias, Jr.
Chairman
Committee on Rules and Administration
United States Senate
Washington, D.C. 20510

Dear Mr. Chairman:

Attached is a report prepared by the Senate Computer Center on its observations of the Senate Office Automation Pilot. Because the Center prepared the report very early in the life of the pilot, some of the observations or conclusions may be different from that which would be found if we were conducting the review at this time.

The Office of the Sergeant at Arms is very supportive of the Committee's undertaking of this important project. The introduction and availability of micro and mini-computers is a natural growth for the Senate to follow in the years ahead. While the overall cost of the full implementation of the Office Automation Project might seem high, the benefits realized in improved staff productivity makes this investment a wise one.

In the weeks and months ahead, we will be asking your Committee to consider other proposals calling for the upgrading of the Senate's computers and computer systems. We believe that actions taken to improve these areas along with the Office Automation Project will place the Senate in a position to meet its data processing needs well into the rest of this decade.

This office stands ready to work with you, your Committee, and committee staff in finding solutions to the Senate's computer needs. Please call on us if we can be helpful in this regard.

Best personal regards.

Sincerely,

Larry E. Smith

Larry E. Smith
Sergeant at Arms

LES:sh

Enclosure

UNITED STATES SENATE
OFFICE OF THE SERGEANT AT ARMS
SENATE COMPUTER CENTER

REPORT ON THE OFFICE AUTOMATION PILOT IN SENATORS' OFFICES

Educational Services and Support Division
Senate Computer Center

September 1983

Report on the Office Automation Pilot
Recommendations and Conclusions

Senate Computer Center staff participating in the Office Automation Pilot (OAP) gained many insights into the possible uses for office automation equipment in Senate offices. Although only one of the many desired applications, word processing, has been used extensively in the pilot offices, it is possible to draw some conclusions at this point based on our experiences with the pilot offices, on our previous knowledge of Senate office needs and preferences, and on remarks made by Senators' staff members in the pilot offices.

Computer Center recommendations for implementing office automation services in the Senate fall into eight general categories: 1) availability of different types of equipment; 2) acquisition of software packages; 3) acquisition of sufficient terminals to meet each office's needs; 4) provisions for training and support; 5) integration of office automation equipment with other Senate computer services; 6) acquisition of supplies and furniture; 7) definition of generalized and specific applications; and 8) the role of the Correspondence Management System in office automation.

Recommendations

1. The number of different equipment configurations available to Senate offices should be limited.

Our experience with the pilot offices shows that they are generally pleased with the various minicomputer and microcomputer configurations that have been made available to them. Most of the offices adapted well and quickly to the equipment and software applications provided by the vendors. However, based on our experience in the pilot program to date, Senate offices differ greatly in their preferences for integrating office automation equipment into their daily operations. Offices that operate with very small working groups may prefer the independence of non-shared microcomputers. Offices favoring centralized management and shared information and resources may prefer a minicomputer, or expansion of the centralized services they are now using. Systems providing offices with both options--to work independently or to share information--would be preferable.

Other factors dictate a relatively narrow range of choice. The Senate will want to take advantage of discounts given to purchasers of large numbers of equipment. Equipment that is turned in by defeated or retiring Senators should be readily usable in other offices. Limiting the variety of equipment types increases the Senate Computer Center's ability to provide training and applications support for all offices. The only way to provide the smooth, effective communications between office automation equipment and other Senate systems, a capability crucial for the most efficient use of computer and staff resources, is to limit the number of equipment types available to Senate offices.

2. The number of software packages available to Senate offices should be limited.

Software for office automation equipment varies greatly in cost, quality, and functionality. For example, hundreds of spreadsheet packages are on the market. This proliferation of software packages makes it very difficult for the novice -- and sometimes even for the expert -- to know what makes one version better than another. In addition, tight control is necessary to properly manage the inventory and licensing requirements for software packages used in the Senate. This control will be even more complex, and more crucial, if the software must be licensed by individual machine, instead of for the Senate as a whole.

Provisions should be made for administering the purchase of software packages. Before an office buys software, the package should be reviewed by Computer Center personnel, who would advise the staff on the effectiveness of the proposed software, and inform them of possible alternatives. Plans should be made for administering software inventory, update and control activities.

3. The Senate should be prepared to provide an adequate number of terminals to meet user demands.

One of the strongest complaints in almost all of the offices concerned the lack of an adequate number of terminals. One factor that motivated some offices to request to participate in the Office Automation Pilot was their desire to have more terminals available to their staffs. When asked how many terminals they needed, most offices replied that almost every staff member should have a terminal within easy access. Many of the most popular applications are dependent on everyone in an office having a terminal. Some of the cost of providing this equipment will be offset as users become comfortable with their terminals and return their standard and memory typewriters to stock. A terminal allocation scheme, based on a closer study of office staff sizes and functions, and on possible equipment configurations, may be appropriate.

4. Careful consideration must be given to the question of whether to provide support and training through the Computer Center or through reliance on vendors.

The Computer Center stands ready to provide whatever support for offices is determined to be advantageous. There are advantages as well as disadvantages to centralizing these services. If the Computer Center is expected to provide support and training, this is likely to require additional resources.

Vendors can be expected to have greater expertise on their systems than any others, including Computer Center personnel. However, the quality of the support personnel who would be assigned to support Senate offices will vary, so that this advantage might not be realized in all cases. The more numerous the systems authorized for the Senate, the more difficult and time consuming it would be for the Computer Center to master each of the various systems, in order to provide adequate support.

In the office automation test, vendors did not provide adequate applications support in many cases. This task was usually performed by a member of the Senator's staff, often at the cost of detracting from other responsibilities. One staff member complained that she was a month behind in her normal duties because she had had to spend so much time supporting the Office Automation Pilot. If this equipment is provided on a permanent basis, however, it can be expected that offices will assign this as a regular part of a staff member's duties.

Regarding support for the integration of office automation functions with other computerized services available through the Computer Center, there would seem to be no alternative to providing this service through the Computer Center, as outside vendors will not be familiar with the entire range of services offered in the Senate.

Although vendors supplied training at no charge during the test, it was clear that this was not standard industry practice. In fact, two vendors requested payment for training members of the OAP team. Vendors may charge for all training or for training more than an allocated number of operators per system. Course fees are usually several hundred dollars per person. Given the staff turnover in the Senate, this could become quite costly. Costs of providing the necessary training through the vendors should be weighed against the costs of providing this training through the Computer Center.

5. The Senate should plan to meet offices' requests that their office automation equipment communicate with centralized Senate computer services and with outside services.

Many staff members participating in the Office Automation Pilot need access to centralized Senate applications on a regular basis. Legislative assistants using a word processor to draft floor statements also need access to the information in LEGIS. Some office automation applications used in the pilot offices need to be thoroughly integrated with other Senate systems. For example, information about letters created on a word processor should not have to be re-entered for those letters to be integrated with the office's filing system. Writing appropriate interfaces, establishing effective communications links, and determining the best way to integrate office systems and procedures are complicated, time-consuming tasks. However, meeting these needs will be essential for the successful use of office automation equipment in many offices. Plans should be made for allocating the resources necessary to provide smooth, user-friendly communications between office automation equipment and centralized services.

6. Supplies and furniture for office automation equipment should be handled by centralized facilities.

Staff in several offices expressed dissatisfaction with the inconvenient method used to procure supplies for their equipment, and the lack of proper furniture on which to place it. Decisions should be made about who will stock what types of items, so that Senate offices can obtain office automation supplies in the same way they currently get other types of supplies. Provisions should also be made to provide adequate furniture for housing the equipment. The types of tables currently available are not suitable for holding most microcomputer configurations.

Many office staff expressed concern that their current office expense allocation is inadequate to purchase supplies for office automation equipment, which generally cost a great deal more than other types of office supplies. The source and amount of monies for these supplies needs to be resolved.

7. The Senate should carefully define its applications requirements, especially in the area of scheduling.

Word processing is a highly desired application in many Senate offices, and most vendors' word processing packages fulfill most Senate offices' needs. However, this is not the case in other application areas. For example, the Senate's unique bookkeeping and expense reimbursement procedures may be better served by a specialized application than by an off-the-shelf spreadsheet or accounting application. At this point, it remains to be seen whether we have completely defined all areas in which automated assistance is needed.

Scheduling is an application for which most of the OAP offices expressed a need. Several of the vendors felt that they could satisfy that need. However, none of them had off-the-shelf software that would address the variety and complexity of the automation requirements of this function in a Senator's office. The Senate should define clear functional specifications for a scheduling application which could be used in most Senate offices.

As we learn more about the possibilities offered by office automation, we will find more opportunities to simplify and streamline Senate office procedures through office automation applications. Office staffs will come to expect automated assistance in a greater number of areas. Because the needs of Senate offices will continue to change and grow, care should be taken to procure flexible and expandable systems.

8. The Senate should continue to support an active Correspondence Management System (CMS), and consider it an office automation vehicle for offices favoring centralized services.

The Correspondence Management System (CMS) is at its highest activity level, and continues to grow as Senate staff members become aware of its functionality and potential. In the last twelve months, the number of offices using CMS services has grown from 121 to 132, a 9% increase.

Many Senate staffers, both from offices participating in the pilot and from offices not in the pilot, have expressed to members of the Senate Computer Center the need to integrate all authorized systems. Some have suggested that functional enhancement of the Correspondence Management System would be the simplest and most logical way to implement new automated capabilities in Senate offices. Many Senate office staff members have stated that the best way to meet their automation needs would be to provide good word processing capabilities through CMS, and to allocate enough terminals to provide easy access to a terminal for everyone who needs it.

This approach has several advantages for Senate offices. It means that everyone in the office would share the same basic skills, making it simple for staff to fill in for one another when necessary. Everyone in the office would have access to the same information, whether it was about a constituent letter or a memorandum from the Administrative Assistant. State office staffs would have access to the same information using the communications network already in place. A large pool of experienced users would be available to offices needing to hire new staff. Given these factors and the expressed preference of some offices for a centralized service, the Correspondence Management System should be included in the Senate's plans for office automation.

Conclusions

The Senate must make immediate plans to meet offices' automation needs. Throughout the Senate, users are demanding more services, more terminals, and greater choice. It is difficult at this early stage to draw definite conclusions based on our limited experience with the pilot offices. We should continue to monitor the progress of these offices and to learn as much as possible from them before we take the next step in the procurement process.

However, based on our related experiences in similar programs and our knowledge of industry trends, one fact is clear: a coordinated, well-planned approach is crucial to the success of this project. Very few Senate offices have the resources or expertise to select or implement an office automation system on their own. At this time, a major effort will be necessary for the Senate to install, implement, and maintain a major influx of new systems and equipment. To meet these demands economically and efficiently, the Senate should concentrate its efforts on obtaining the requisite resources to plan and execute an expanded office automation program.

APPENDIX I

LETTERS FROM SENATORS

LETTER SENT TO PARTICIPANTS IN PILOT TEST

CHARLES McC. MATHIAS, JR., MD., CHAIRMAN
MARK O. HATFIELD, OREG.
HOWARD H. BAKER, JR., TENN.
JAMES A. McCLURE, IDAHO
JESSE HELMS, N.C.
JOHN W. WARNER, VA.
ROBERT DOLE, KANS.
WENDELL H. FORD, KY.
CLAIBORNE PELL, R.I.
ROBERT C. BYRD, W. VA.
DANIEL K. INOUYE, HAWAII
DENNIS DeCONCINI, ARIZ.

JOHN B. CHILDERS, STAFF DIRECTOR
ANN B. COOK, CHIEF CLERK
WILLIAM McWHORTER COCHRANE, MINORITY STAFF DIRECTOR

United States Senate
COMMITTEE ON
RULES AND ADMINISTRATION
WASHINGTON, D.C. 20510

July 22, 1983

Dear Senator:

Thank you for your interest and support in the computer test now being conducted in your office. Through your cooperation, the staff of the committee and the Computer Center have observed the effects in your office. The committee staff is now compiling those observations and will prepare a report to the committee. The committee will review the findings of staff and consider recommendations.

On behalf of the committee I invite you to give us your personal observations. With the experience you have gained there can be no better source of expert advice on this matter so close to all Senators.

If you plan to respond, I would appreciate receiving your comments by July 31.

Meanwhile please accept my thanks for your assistance.

Sincerely,

Charles McC. Mathias, Jr.
Chairman

LETTER SENT TO SENATORS WHO WERE NOT PARTICIPANTS IN PILOT TEST

CHARLES McC. MATHIAS, JR., MD., CHAIRMAN
MARK O. HATFIELD, OREG.
HOWARD H. BAKER, JR., TENN.
JAMES A. McCLURE, IDAHO
JESSE HELMS, N.C.
JOHN W. WARNER, VA.
ROBERT DOLE, KANS.
WENDELL H. FORD, KY.
CLAIBORNE PELL, R.I.
ROBERT C. BYRD, W. VA.
DANIEL K. INOUYE, HAWAII
DENNIS DeCONCINI, ARIZ.

JOHN B. CHILDERS, STAFF DIRECTOR
ANN S. COOK, CHIEF CLERK
WILLIAM McWHORTER COCHRANE, MINORITY STAFF DIRECTOR

United States Senate
COMMITTEE ON
RULES AND ADMINISTRATION
WASHINGTON, D.C. 20510

July 22, 1983

Dear Senator:

You may be aware that the Rules Committee has been conducting a test of small computers in several Senator's offices. Thanks to the interest and cooperation of the Senators participating in the test it has been a most informative and worthwhile exercise.

The Committee will soon be considering issues related to providing similar equipment to all offices. In addition to information on the pilot test, the committee would like to hear from all other interested Senators. You are cordially invited to submit a statement of your views on this matter for committee's consideration.

If you do plan to respond, I would appreciate receiving your comments by July 31.

Sincerely,

Charles McC. Mathias, Jr.
Chairman

MARK O. HATFIELD, OREG., CHAIRMAN

TED STEVENS, ALASKA
LOWELL P. WEICKER, JR., CONN.
JAMES A. MC CLURE, IDAHO
PAUL LAXALT, NEV.
JAKE GARN, UTAH
THAD COCHRAN, MISS.
MARK ANDREWS, N. DAK.
JAMES ABDNOR, S. DAK.
ROBERT W. KASTEN, JR., WIS.
ALFONSE M. D'AMATO, N.Y.
MACK MATTINGLY, GA.
WARREN RUDMAN, N.H.
ARLEN SPECTER, PA.
PETE V. DOMENICI, N. MEX.

JOHN C. STENNIS, MISS.
ROBERT C. BYRD, W. VA.
WILLIAM PROXMIRE, WIS.
DANIEL K. INOUYE, HAWAII
ERNEST F. HOLLINGS, S.C.
THOMAS F. EAGLETON, MO.
LAWTON CHILES, FLA.
J. BENNETT JOHNSTON, LA.
WALTER D. HUDDLESTON, KY.
QUENTIN N. BURDICK, N. DAK.
PATRICK J. LEAHY, VT.
JIM SASSER, TENN.
DENNIS DE CONCINI, ARIZ.
DALE BUMPERS, ARK.

J. KEITH KENNEDY, STAFF DIRECTOR
FRANCIS J. SULLIVAN, MINORITY STAFF DIRECTOR

United States Senate
COMMITTEE ON APPROPRIATIONS
WASHINGTON, D.C. 20510

1983 AUG -1 PM 12:40

July 29, 1983

Honorable Charles McC. Mathias, Jr.
Chairman
Committee on Rules and Administration
Washington, D.C. 20510

Dear Mac:

I am responding to your letter of July 22, 1983 for ideas on procedures and criteria for the Senate computer system.

First, the current correspondence management system offered to Senate offices has had its problems, but does fulfill the demand for a professional and quality support service. The enhancements that have been added to CMS are worthy, efficient features and the continuation of the centralized system of user service and support that is currently being provided is beneficial.

Second, any enhancement that has proved to be a legitimate request has been added to the present system and the same procedure should follow for any new technological advances that may occur in the future. This would also apply to any office management and information reports.

The Rules Committee may want to consider some of the following suggestions during deliberations on office automation systems.

1) Individual office accounts for leasing of small computers. These would be used for storage of records and jobs not available on our current system.

2) Limited on-line capability of index and mail files.

3) Exploring the availability of electronic offices.

4) Allowing users more access to software.

Every effort should be made to enhance our current correspondence system. We all have spent many hours coordinating and maintaining an efficient and thorough network that has served us well.

Sincerely,

MARK ANDREWS
U.S. Senator

MA/aw

WILLIAM L. ARMSTRONG
COLORADO

United States Senate
WASHINGTON, D.C. 20510

1983 AUG -9 AM 7: 13

August 2, 1983

JFS
xc: JBC.

The Honorable Charles McC. Mathias, Jr.
Chairman
Committee on Rules and Administration
United States Senate
Washington, D.C. 20510

Dear Mac:

Thank you for your letter asking for my observations on the computer test in my office.

Two members of my staff prepared observations and conclusions based on our experience with the test to date and I have enclosed copies of these memos for your review and consideration.

I hope your committee finds this material helpful in your deliberations. Please call on me if I can be of further assistance as your Committee reviews computer services for Senate offices.

Best regards.

Sincerely,

William L. Armstrong

WLA:rpj

enclosures

TO: SENATOR ARMSTRONG AUGUST 1, 1983

FROM: BOB POTTS

SUBJECT: OFFICE AUTOMATION PILOT TEST

This is a summary of my observations after two months of the pilot test of office automation systems. In addition to this memo, I have attached comments from Wendy Lechner, who has had the primary responsibility for day to day operations of the system in our office.

Observations

1. The only feature of the system installed in our office that we have used effectively is the word processing capability. This is a considerable improvement over the way documents of all kinds were prepared in the past and adds greatly to the efficiency of the office.

2. The system installed in our office has many other capabilities; but the design and limitations of the test are such that we have something which is neither "fish nor fowl."

The central processing unit has the capability for operating with a much larger number of terminals...leading to true office automation (document transmission; phone messaging, other forms of electronic mail, office-wide scheduling, information retrieval, etc.).

However, operating with only five terminals and one correspondence quality printer essentially defeats practical application of office automation. Unless almost everyone in the office is equipped with a terminal, or everyone in a particular section, there is little or no dramatic difference in the flow of paper and regular office routine.

And, there are distinct disadvantages to having what is essentially "half" a system. We are sharing a central processing unit with Senator Baucus' office. The unit effectively requires the dedication of a separate room (both physically and in terms of noise). A great deal of one staffer's time from both offices is required to operate and monitor the central processor. So at the moment, we have all the "disadvantages" of a potentially powerful system without any of the offsetting advantages.

3. I should note that the contractor recognized this dilemma from the start and expressed the concern that we really wouldn't be testing office automation with the present configuration.

Conclusions

1. Some configuration of terminals, printers, central processor, and related software is very desirable for all aspects of office work.

2. The mix of equipment and software depends on the budget. Obviously a lower level of funding means simply replacing a few memory typewriters with stand-alone word processors. With a larger budget, a full blown correspondence/office automation system is very feasible and desirable.

3. For our office, and I would guess for many others, there is no question about the need for such systems and such equipment. Many members of our staff have used a variety of word processors and computer systems, taken computer courses or had extensive training sessions -- as part of their current jobs, past jobs, or from personal interest.

We are, however, frustrated that we can't pull all of this together and make our own management decisions about systems we would use to perform the work of the office.

--We have a Senate provided system for handling correspondence.

--We have another Senate provided system for handling mass mailings.

--We have yet another system for correspondence which we are using because we believe it is more efficient than the Senate provided system.

--We have another Senate provided system for word processing (the pilot test).

--We also have the LEGIS and the SCORPIO systems for information retrieval.

--We also have Senate provided memory typewriters.

One staffer literally sits at a desk with one terminal for one system, another terminal for another system, and a regular IBM Selectric Correcting typewriter.

In my opinion, this confusion, duplication, and overlap is the natural result of the current Senate procedure that authorizes "systems" and equipment, rather than an overall budget allowance to be managed by each office.

Our experience with the pilot project to date simply confirms my view that this is the eventual answer--letting each office, within the constraints of a budget allowance--go out and buy the services they require to meet the needs of that office.

Senator Armstrong
M: Wendy
Computer Test Program/Sperry System
E: July 27, 1983

s

all, Sperry is a much better word processing system than we have had in past for some of the following reasons:

Word processing is much faster. The screen allows us to see what we're g and edit as we go. Once a project is finished, editing is quite easy generally fast because of the special editing features (save/recall, ch - for quickly finding where to make changes, inserting and deleting,)

The system is quite easy to learn and to use. I've only trained one on but because the system is straight-forward and the buttons are fairly -explanatory, she caught on in only a couple of days to the basics. As s using the system, the training manuals are quite good on the basics lve problems and to teach new tricks as you go.

Printing final copies is much faster than our previous system. Qyx about 3 minutes/page vs. Sperry's 1 minute, 10 seconds/page. On long cts, this makes a tremendous difference.

The quality of printing is good, and we just yesterday receive a list ditional print wheels so we can use better and more varied type styles pecial projects. Even though we don't currently have much use for the quality printer, when we get all the LAs working on the system, it d be very helpful in solving the problem of only one printer for too people.

Also as you know, we now have an indexing system so that we can do es once the material has been placed in that system. I've tried it is very effective and very fast. If we keep Sperry, I'm sure we'll a great deal.

y own experience and from info from our other users, we've unately developed quite a list of problems.

e have experienced an abnormally large number of mechanical problems. know, we've had a data base error for the last two months that does low us to store what we've put in the system in a timely manner. people say the problem is not fixed, and just during the typing of emo the system has shut down twice and I've had to start it up again. eans it shuts down everyone in our office and Baucus' as well every In addition, we have had five desk stations break down in the last ks (one was in the Senator's office where it got stuck making a loud ous beep).

2. Certain editing features are either non-existant or very slow. For example, we "repaginate" when we edit multiple page documents which means the system realigns the pages automatically. However, this can take 5 minutes for a 7 page double spaced document. As you know, we do a great many documents that are much longer and require many revisions.

The machine doesn't do envelopes, doesn't do carbons, doesn't pull the paper through straight (many of our documents end up tilted sideways), doesn't have a stop code (to insert names, addresses, fill-ins) and the typewriter mode is virtually useless because you can't line up or see what you're typing.

3. The word processing is the only application that we can actually use with our limited number of terminals and printers. The other features are simply there but unusable on any practical basis.

4. Changing paper (which Holly and I each must do at least 14 times a day (no exaggeration) is very cumbersome. We have to unload the tray (not easy for short people), switch paper, reload the tray, press two buttons, release another, wind the first sheet through, repress that last button and then print. The printer we have simply does not have the capacity for a dual sheet feeder, however Sperry may have a more advance one that we don't know about (I haven't asked what the new ones do). In addition, printing on the correspondence quality printer is slow (not as slow as our last machine, but slow nonetheless).

LLOYD BENTSEN
TEXAS

COMMITTEES:
FINANCE
ENVIRONMENT AND PUBLIC WORKS
JOINT ECONOMIC
SELECT COMMITTEE
ON INTELLIGENCE

United States Senate
WASHINGTON, D.C. 20510

✓

July 27, 1983

1983 JUL 29 PM 12: 15

JKS/rr

The Honorable Charles Mathias
Chairman
Committee on Rules and Administration
United States Senate
Washington, D.C. 20510

Dear Mr. Chairman:

Your consideration and testing of small computers for Senate use is to be applauded. Senate computer work has quadrupled in the past four years with the result that our present system is extremly over-loaded. Small computers would reduce the workload on the current CMS system and allow for greater diversity in job operations as required in individual offices.

A small computer in my office working in tandem with the CMS system could improve the job effeciency and reduce staff time-loss in several areas including management and administration, tickler files, appointments calendar, press, legislative memos and correspondence editing.

I look forward to seeing the Rules Committee report of the recent testing; and if computers are indeed certified for use in the Senate, I would like my office to be among the first considered for installation.

Sincerely,

Lloyd Bentsen

Lloyd Bentsen

United States Senate
WASHINGTON, D.C. 20510

[illegible]
ENVIRONMENT AND PUBLIC WORKS
JOINT ECONOMIC
SELECT COMMITTEE ON INTELLIGENCE

July 21, 1983

The Honorable Charles Mathias
Chairman
Committee on Rules and Administration
United States Senate
Washington, D.C. 20510

Dear Mr. Chairman:

It has come to my attention that the Rules Committee is conducting a test in some selected Senate offices with various computer systems to evaluate their usefulness and compatibility with the Senate's current computer system.

My staff frequently experiences numerous, time-consuming delays and assorted other problems with the current system. Because of these frustrating problems I would like to join this test project. However, if this is not possible please consider this as my formal request for installation of an in-house computer should any be certified for Senate use.

Thank you for your consideration in this matter.

Sincerely,

Lloyd Bentsen

Lloyd Bentsen

bcc/John Swearingen

CHARLES McC. MATHIAS, JR., MD., CHAIRMAN

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United States Senate

COMMITTEE ON
RULES AND ADMINISTRATION
WASHINGTON, D.C. 20510

August 18, 1983

The Honorable Lloyd Bentsen
United States Senate
Washington, D.C. 20510

Dear Lloyd:

This is in response to your letter of July 21, 1983. The test of computers in Senators' offices is now at the analysis and report writing stage, therefore we do not plan to expand the number of offices participating in the test.

We are striving for an early decision on what equipment should be made available on a Senate-wide basis and how this will be accomplished. Your request for such equipment is noted and we will keep you informed as this matter proceeds.

With best wishes,

Sincerely,

Charles McC. Mathias, Jr.
Chairman

MAX BAUCUS
MONTANA

United States Senate
WASHINGTON, DC 20510

28 10 53

Miriam

July 25, 1983

9K5/4

The Honorable Charles McC. Mathias
Chairman
Committee on Rules and Administration
United States Senate
Washington, D.C. 20510

Dear Mac:

Thank you for requesting my observations on the computer pilot project. I was delighted to participate in the test and to have this opportunity to comment. My staff and I are fairly pleased with Sperry and we are hopeful that our experience will guide you.

At the moment, six members of my staff qualify as "heavy users." Another five are moderate users. The remainder are light or non-users. I find it significant that half of my staff is composed of moderate to heavy users. Sperry provided two days of "intensive" training, but some of the heavy users are self-trained.

In general, I would say that we have not yet used Sperry to its full potential. I feel it would be necessary to have additional terminals to do so. In addition, I feel it would be of enormous help if Sperry could communicate with the Senate's computer equipment. I must also add that I had hoped that my office would be able to use Sperry in lieu of CMS. This has not been possible because the list processing software required for this is not yet available.

Many of my staff use Sperry as a word processor. But since there are only five desk stations and one printer in the office, we do much less electronic mail and letter composition than we prefer.

I find the word processing immensely superior to anything available on CMS. However, unlike some word processing systems, Sperry does not store continuous pages. It stores individual pages with internal pointers to related pages. The need to repaginate is a problem.

Sperry's "files" and "documents" work well. Directories of those files are easily accessible and understood.

Sperry uses several types of printers. We have the 45 characters per second, letter quality printer which, to me, appears to be slower than its advertised speed. Each office should have more printers, with, perhaps, a mix of faster, draft quality and letter quality printers.

The lack of communications with the Senate equipment, especially CMS, is a major obstacle to more usage. Many speeches must be retyped onto CMS so that my field offices can print copies. My legislative correspondents prefer to type draft versions of computer letters on the Sperry system, but these must also be retyped into CMS.

The Sperry representatives have been extremely helpful. Service calls have been minimal and made promptly. They have been very cooperative and have quickly provided most of the requested documentation. Self-training diskettes and literature were distributed to those who took the Sperry training session. However, the complete self-training packets are not yet available for general release.

In summation, I believe that more terminals, especially printers, must be available within each office. Electronic mail within the office is impractical now. We must have more than five desk stations and one printer. The Senate must prepare for the day when every desk has a terminal. Finally, a communications link with the Senate equipment is imperative.

I hope these comments will be useful to the Committee as it considers the future needs of Senate offices.

With best personal regards, I am

Sincerely,

Max

BILL BRADLEY
NEW JERSEY

COMMITTEES:
FINANCE
ENERGY AND
NATURAL RESOURCES
SPECIAL COMMITTEE ON
AGING

United States Senate
WASHINGTON, D.C. 20510

1983 JUL 29 PM 5:48

July 27, 1983

Honorable Charles McC. Mathias, Jr.
Chairman
Committee on Rules and Administration
Washington, D.C. 20510

Dear Mr. Chairman:

I am writing in regard to the computer test being conducted in my office. I welcome this opportunity to give you my personal observations on how this system has affected my office operation.

The pilot study of office automation has been a great success in my office. The objective of initiating advanced word processing capabilities in order to better meet the needs of constituents has been fulfilled.

The Rules Committee, by conducting the pilot in order to prove that an office automation system would work in a Senator's office, has made an important and correct step in establishing a sound foundation for implementing computer systems in Senate offices.

My office is testing a Digital PDP 1144 with word processing software. Currently, it is being utilized in my legislative, scheduling, press, constituent requests and correspondence departments. It is my hope that as further software packages become available, my administrative personnel and I will also have access to video display terminals for purposes of correspondence, inter-office communications and technical information storage. I look forward to this application.

This system provides us with both flexibility and independence in managing day-to-day office activities. The word processing feature alone saves my professional staff considerable time in the necessary, but time consuming clerical and administrative responsibilities of their jobs. We have seen increased efficiency and improved creativity in writing, editing and proofreading.

My clerical staff has noticed a marked absence of typographical errors, superior print quality and notably improved administrative organization. Overall, this system has improved efficiency, organization and the management of my office. I strongly support its continuation.

I suggest that procurement and accounting for these systems be handled through the Senate Sergeant at Arms office. This will give the Sergeant at Arms increased control by representing all the Senate offices in dealing with these companies. A possible offset to the cost of these purchases would be to trade in equipment replaced by the computer system.

With respect to the relative merit of the single vendor or multi-vendor system, I firmly believe that the competitive atmosphere created by the multi-vendor system will insure quality service, up-to-date equipment and software. Selection of 4 to 6 vendors by the Rules Committee will create a competitive environment among the venders themselves, providing the continued quality service necessary for our offices.

Once again, I welcome this opportunity to comment on the pilot program. I appreciate the opportunity to participate in this pilot and hope my office's experiences will be helpful to you in selecting the best systems for the Senate.

Sincerely,

Bill Bradley

Bill Bradley

BB/ry

Answered 10/31/83

BILL BRADLEY
NEW JERSEY

COMMITTEES:
FINANCE
ENERGY AND
NATURAL RESOURCES
SPECIAL COMMITTEE ON
AGING

United States Senate
WASHINGTON, D.C. 20510

1983 OCT 28 PM 2:39

October 28, 1983 JRS/p

Honorable Charles McC. Mathias, Jr.
Chairman
Committee on Rules and Administration
United States Senate
Washington, D.C. 20510

Dear Mr. Chairman: Mac

As you consider the continuation and expansion of the office automation system, I wanted you to know of the profound impact it has had on my office. I urge you to support the acquisition of this type of system for other members of the Senate, when you consider this matter at the November 1 meeting of the Rules Committee.

For those of you who have not had an opportunity to participate in this pilot, I believe this has been a successful experiment. It has enabled my office to initiate advanced word processing capabilities in order to better meet the needs of my constituents.

The Rules Committee has demonstrated through the pilot program how an office automation system can increase the efficiency of a Senator's office. This is an important and correct step in establishing a sound foundation for implementing computer systems throughout the Senate.

I appreciate the opportunity to participate in this pilot and hope my office's experiences will be helpful to you in selecting the best system for the Senate.

Best wishes.

Sincerely,

Bill Bradley

Bill Bradley

JOHN H. CHAFEE
RHODE ISLAND
FINANCE COMMITTEE
COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS
COMMITTEE ON ENERGY AND NATURAL RESOURCES
SELECT COMMITTEE ON INTELLIGENCE

United States Senate

WASHINGTON OFFICE:
WASHINGTON, D.C. 20510
(202) 224-2921
PROVIDENCE OFFICE:
301 JOHN O. PASTORE
FEDERAL BUILDING
KENNEDY PLAZA
PROVIDENCE, RHODE ISLAND 02903
(401) 528-5294
TOLL FREE NUMBER
IN RHODE ISLAND
1-800-662-6188

1983 JUL 27 AM 11: 10

July 26, 1983

JKS/qr

The Honorable Charles McC. Mathias, Jr.
Chairman
Committee on Rules and Administration
United States Senate
Washington, D.C. 20510

Dear Mac:

Thank you for your letter of July 22 seeking comments on providing Senate offices with small computers.

As I have indicated in previous correspondence on this subject, I heartily endorse the concept of providing this equipment. Ultimately, it seems to me, such equipment would save the Senate money and would greatly improve the ability of each office to deal with correspondence, budgeting, scheduling, press functions, and maintenance of files.

I would offer some suggestions:

First, I think it is important that whatever equipment is chosen be capable of running the largest possible library of "off-the-shelf" software. Many "stand-alone" word processors will not run other software and, given their expense, seem to me to be a poor choice. In my own office, small micro-computers could be used to keep schedules, handle the office budget, and store press files, among other chores, as well as for word processing.

Second, I think it is important for machines to have the capability of being linked together, and to have the capability of being linked to CMS and to outside data bases. This affords versatility.

Finally, I would urge the Rules Committee to look upon these machines as a complement to, rather than as a replacement for, CMS. We will always have need for production of volume amounts of form mail, for storage of mailing lists and for other tasks already handled well by the existing CMS. What we lack is the ability to handle smaller and more specialized tasks, which is where the small computer comes in handy. I am not sure that we even need the power of mini-computers; the new microcomputers come with the capability of adding more than enough memory, have the ability of adding countless peripheral devices, are able to run thousands of existing programs, and are much cheaper.

Thank you for giving me the opportunity to comment.

Sincerely,

John

John H. Chafee
United States Senator

JHC/dst

WILLIAM S. COHEN
MAINE

United States Senate
WASHINGTON, D.C. 20510

October 20, 1983

The Honorable Charles McC. Mathias
Chairman
Committee on Rules and Administration
United States Senate
SR-305
Washington, D.C. 20510

Dear Mac:

Thank you for your letter inviting comment on issues related to providing computer systems to Senate offices. I appreciate this opportunity to share my views with you.

I am very pleased that the Rules Committee is moving forward with plans to bring computer systems into Senate offices. There is no question in my mind that excellent use can be made of emerging office automation technology to improve effectiveness and productivity. It is my hope that as the Committee proceeds to consider the capabilities and general configuration of the systems that will be approved for use, its members will seek to take the fullest advantage of the ongoing improvement in technology and of the brisk competition among vendors.

In considering the several activities within my office which would be facilitated by computerization, I have formulated some general ideas regarding the capabilities and characteristics that I would find useful in an office system. These I would like to share with you.

CAPABILITIES

WORD PROCESSING

Given the nature of the business conducted by a Senator's office, word processing must necessarily be of central concern in the selection of an office computer system. Approved systems should, of course, feature word processing programs that are both "user friendly" and practical. In order to make best advantage of word processing capabilities, systems should also feature fast, finished quality printing capability.

DATA BASE MANAGEMENT

Data base management capabilities could provide for significant savings in time, effort, and office storage space. Offices could design information storage schemes to suit their own particular needs more closely than current shared systems or manual systems permit.

SCHEDULING

Office software which supports scheduling has been improving. Such a program, adapted to accommodate the schedules of Senators or of staff, could prove very useful.

ACCOUNTING

Similarly, accounting programs are available for use with most office systems which could ease and speed office accounting considerably.

GENERAL SYSTEM CHARACTERISTICS

FLEXIBILITY

The configuration of systems approved for use in Senate offices should provide users with the flexibility to adapt systems to staff needs -- not vice versa. The incorporation of automated systems into office operation will certainly be a process of discovery. Systems can be used to best advantage if they permit the discovery process to lead to improvements in system use.

EXPANDABILITY

Similarly, systems should leave room for expansion. As offices come to rely more extensively upon their automated systems, and as new technologies and applications are developed, the need for system expansion will inevitably arise. It will probably also serve in the long run to begin the process of automation with an eye toward eventually establishing direct communications between systems in a Senator's Washington and state offices.

"USER FRIENDLINESS"

In order to minimize the problems of staff unfamiliarity with office computer equipment which could discourage the fullest and widest use of the proposed systems, use of system programs and applications should be easy to learn. Fortunately, vendors of systems and applications software

The Honorable Charles McC. Mathias
October 20, 1983
Page Two

have responded very well to market demand for "user friendly" systems. Systems are widely available which combine power with ease of learning and use.

GENERAL VENDOR CHARACTERISTICS

Competition among a multitude of vendors of office automation equipment currently gives prospective buyers a choice among a number of generally comparable systems. Given these characteristics, perhaps the most important differences between vendors will be differences in willingness and ability to assist offices in system implementation and maintenance.

Senate offices will require considerable assistance in the process of automating procedures and adjusting to the presence and use of new office equipment. At the inauguration of new system use, the extent to which a vendor is involved in system implementation can be a crucial factor in getting off on the right foot. Similarly, the extent to which a vendor remains involved in the support and maintenance of one of their systems can play an important part in staying on the right track.

In closing, I commend the Rules Committee for taking an important step toward bringing about a great improvement in the way in which the Senate does business. I would encourage my colleagues on the Committee to give as free rein as possible to the prospective users of the new systems in order to take the fullest possible advantage of the creativity and ingenuity of Senate staffs.

With best wishes, I am

Sincerely,

William S. Cohen
United States Senator

WSC:win

ALAN CRANSTON
CALIFORNIA

United States Senate
WASHINGTON, D.C. 20510

July 29, 1983

1983 AUG -1 PM 1:43

JKS/r

Honorable Charles MacC. Mathias, Jr.
Chairman, Rules and Administration
305 Russell Senate Office Building
Washington, D.C. 20510

Dear Mac,

Thank you for your letter of July 22, 1983, regarding small computers for Senate offices. I am pleased to have the opportunity to have input into this issue since it is one to which I have accorded a very high priority.

By coincidence, my office is currently conducting a fairly extensive examination of our office systems and procedures for the purpose of determining how we could best utilize intelligent word processing equipment. This study has just begun and completion is expected by the end of August. I would hope to have the opportunity for further input at that time.

In the meantime, following is a list of various broadly defined functions that we would perform with this type of equipment.

-- Composition, preparation, review, editing and production of legislation, testimony, floor statements, and individualized responses to constituent mail - in short, anything that requires review and editing.

-- We believe there are many "press" applications ranging from the composition, review, editing, etc. of press releases, to the filing, recording, categorizing and archiving of all my public statements.

-- This type of equipment would be invaluable for the maintenance of personnel records, preparation of schedules and a variety of other activities that might be described as "administrative".

-- Word processing equipment would be essential for the creation, follow-up & filing for easy access and continuity of all casework activity.

-- Word processing equipment would be an invaluable aid in the collection and analyses of data related to, among other things, constituent mail, legislative issues and staff productivity. In general we perceive this equipment as a tool that would not only improve paper flow and production but also one which would simplify and improve management and control of office activity.

As was noted at the outset, we are at the beginning of a study that will more narrowly define and quantify the functions described above. If it is useful to the acquisition process, I will be happy to share the results of this study.

I am concerned that the systems chosen not only be able to perform the described functions but also that they be extensive enough to make an appreciable impact on the volume of work in the office. We envision a useful system to be one that provides for at least fifty workstations (terminals), twelve printers and very substantial CPU capacity. In addition, we have the problem of having an office in the Capitol as well as in the Hart Building, and, of course, we have field offices in San Francisco and Los Angeles. A minimum specification for the equipment selected should include the ability to communicate among all these locations in the same fully integrated system.

Again, I appreciate the opportunity to comment. I am looking forward to hearing how this project is progressing.

Sincerely,

Alan

Alan Cranston

[illegible], MD., CHAIRMAN
WENDELL H. FORD, KY
CLAIBORNE PELL, R.I.
ROBERT C. BYRD, W. VA
DANIEL K. INOUYE, HAWAII
DENNIS DeCONCINI, ARIZ.

JOHN B. CHILDERS, STAFF DIRECTOR
ANN B. COOK, CHIEF CLERK
[illegible] McWHORTER COCHRANE, MINORITY STAFF DIRECTOR

United States Senate
COMMITTEE ON
RULES AND ADMINISTRATION
WASHINGTON, D.C. 20510

August 2, 1983

The Honorable Alan Cranston
United States Senate
Washington, D.C. 20510

Dear Alan:

Thank you for your thoughtful views on computers in Senate offices.

I will accept your offer of a copy of the study now being conducted in your office. Thank you for offering.

Sincerely,

Charles McC. Mathias, Jr.
Chairman

ALFONSE M. D'AMATO
NEW YORK

United States Senate
WASHINGTON, D.C. 20510

cc Liz.

August 3, 1983

Mr. John Swearingen
Director (Technical Services)
Committee on Rules and Administration
SR-318 Russell Senate Building

INSIDE MAIL

Dear John:

The IBM Word Processor has been an extremely useful addition to our busy Senate office. In both its administrative and legislative applications, the system has allowed us to markedly increase office productivity without adding extra personnel. It is especially useful in creating individual letter responses, memos, floor statements, etc.

The chief advantage of the system is the editing capability it provides. An enormous amount of time is saved by editing a rough draft and then producing a corrected copy in minutes on the displaywriter. Previously, it often took two to three times as long to produce a letter or memo, with each draft retyped through a memory typewriter.

The next application of the system for our office will involve scheduling. The Senator's entire schedule will be put on the system to produce a flexible and easily updated monthly readout.

After using the IBM system I can unequivocally say that it has saved us time and personnel costs in a very busy (and crowded) office, where time and space are both at a premium. I would advise that the system be made available to other offices with the proviso that not everyone in an office needs or should have such a system. If these systems are introduced into the Senator a sensible and moderate fashion, they will save more than they cost over the long run.

Sincerely,

John Zagame

John R. Zagame
ADMINISTRATIVE ASSISTANT TO
SENATOR ALFONSE M. D'AMATO

JRZ:eu

P.S. This letter is an example of the capabilities of the displaywriter.

FONSE M. D'AMATO
NEW YORK

United States Senate
WASHINGTON, D.C. 20510

August 3, 1983

O.K. / w. / changes

Mr. John Swearingen
Director (Technical Services)
Committee on Rules and Administracion
SR-318 Russell Senate Building

INSIDE MAIL

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Sincerely,

John R. Zagame
ADMINISTRATIVE ASSISTANT TO
SENATOR ALFONSE M. D'AMATO

JRZ:su

CHARLES McC. MATHIAS, JR., MD., CHAIRMAN
MARK O. HATFIELD, OREG.
HOWARD H. BAKER, JR., TENN.
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JESSE HELMS, N.C.
JOHN W. WARNER, VA.
ROBERT DOLE, KANS.
WENDELL H. FORD, KY.
CLAIBORNE PELL, R.I.
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JOHN B. CHILDERS, STAFF DIRECTOR
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WILLIAM McWHORTER COCHRANE, MINORITY STAFF DIRECTOR

United States Senate

COMMITTEE ON
RULES AND ADMINISTRATION
WASHINGTON, D.C. 20510

August 10, 1983

JRS

The Honorable Charles McC. Mathias, Jr.
Chairman
Committee on Rules and Administration
United States Senate
Washington, D.C. 20510

Dear Mr. Chairman:

This letter is in response to your request for my written views on the office automation pilot program now being conducted in twelve Senate offices, including my own.

Since April my staff has been using five Xerox word processing terminals, each with its own printer and double disk drive. This is the Xerox approach--self-contained work stations, each with its own processor, rather than a single processor to which many terminals are connected.

Xerox provided three "personal computers" and two word processors which are designed for high-output work. My staff has found this equipment to be of great advantage, especially when last-minute changes need to be made to a speech or statement. All re-typing is eliminated, and final copies are always clean.

In addition to the word processing software used on all five terminals, Xerox provided two other software packages. One is an electronic spreadsheet, which my Office Manager uses for all accounting and record-keeping functions related to his position. This program has greatly enhanced his efficiency and enabled us to much more easily project our office allowances and budgets. The other is a business graphics package, which generates pie charts and bar graphs and other types of graphs from entered data.

The major disadvantage of the system we have been using is the lack of any ability to communicate between the terminals. If the Senate intends to move toward fully-automated offices, it would not seem wise at this point to invest in a relationship with a vendor who does not put emphasis on communication between terminals. The ability to send and receive messages between terminals, and particularly between Washington and State offices, would be one of the most important, useful, and efficient functions an office-automation system could provide. Keeping a Senator's schedule on a terminal, for instance, would be of only marginal advantage if the schedule could not be "sent" to other terminals.

My recommendation for office automation involves three main points:

1) More than one vendor should be approved for the offices to choose from.

2) Assuming vendors are willing to do so at a reasonable cost, all vendors approved should be prepared to offer electronic spreadsheets, communication between terminals, a program which can be used to keep schedules both in Washington and in State offices, and a word processing package.

3) The vendors chosen should be able to provide systems which can "grow," whether equipment is leased or purchased.

It is important for us to keep in mind, while considering the cost of office automation systems, the cost of equipment currently in use which will be replaced by such systems. In other words, there is some money to be saved by the Senate on typewriters and other equipment which will not be purchased in the future, and if someone could compare the relative costs involved, it would be extremely useful to the Committee in considering the alternatives.

Another point of vital concern to my office is that the months of work my staff has put onto disks with the Xerox system be convertible to whatever system my office should end up with. We have put the system to a full-fledged test, and we would not want to be in a position of having to re-do all of that work.

Overall, the pilot has been a great success in my office, giving my staff a taste of what is possible with an automation system. We look forward to an enhanced system in the future.

Sincerely,

Dennis De Concini
DENNIS DeCONCINI
United States Senator

DDC/smq

ALAN J. DIXON
ILLINOIS

United States Senate
WASHINGTON, D.C. 20510

COMMITTEES:
AGRICULTURE, NUTRITION, AND FORESTRY
BANKING, HOUSING, AND URBAN AFFAIRS
SMALL BUSINESS

1983 JUL 29 PM 5:46

July 29, 1983

The Honorable Charles McC. Mathias
Chairman, Committee on Rules and
  Administration
305 Russell Senate Office Building
Washington, D.C. 20510

Dear Chairman Mathias:

Thank you for your invitation to comment on procedures and criteria to be used in the procurement of computer equipment.

As you are aware, I have been in touch with you on several occasions this year regarding my desire in pursuing alternatives to present office automation equipment. This remains an important objective for my office. I would like to commend the Rules Committee for organizing and implementing the office automation pilot program. I understand that the pilot has been a huge success.

Word processing is a primary facet of an office system. The Correspondence Management System has taken care of a part of this need since I have been a member of the Senate. A stand alone mini computer in our office could greatly assist us in conjunction with CMS. With a stand alone system that would communicate with CMS, we could have an electronic mail system, scheduling for my administrative assistant and me, a press and speech function, spread sheet accounting, and an electronic rolodex. Office management and information flow would be tremendously enhanced by the availibility of these additional functions.

Since each office has different needs and management goals, I feel that a multi-vendor system would allow the offices to evaluate these needs and goals, and determine the appropriate vendor to satisfy these requirements. A multi-vendor system would also create a competitive atmosphere and enhance the quality of service provided by the vendors.

Once again, I appreciate the chance to comment on this matter.

Kindest personal regards.

Sincerely,

AJ

Alan J. Dixon

CHRISTOPHER J. DODD
CONNECTICUT

United States Senate
WASHINGTON, D.C. 20510

Jessica 10/27/83
[illegible]

October 25, 1983

JKS | gr
program

The Honorable Charles McC. Mathias, Jr.
Chairman
Committee on Rules and Administration
United States Senate
Washington, D.C. 20510

Dear Mac:

I and my staff are anxiously awaiting some follow up from the Committee on Rules and Administration relative to the pilot study of office automation presently being tested by 13 offices.

Although my office was not able to participate in the pilot, my staff has provided me with an in-house study conducted over a period of several months in my office, which sums up the needs of each staff member and/or function of this office. Whereas the present Correspondence Management System clearly meets most of the daily needs of responding to high volume pressure mail it does not meet the needs of my professional and administrative staff in areas where modern state of the arts technology is capable of providing greater efficiency, organization and quality production.

I would appreciate knowing of the status of the pilot program and the plans of the Rules Committee in expanding the tested systems throughout the Senate.

Sincerely,

CHRISTOPHER J. DODD
United States Senator

DURENBERGER
MINNESOTA

United States Senate

WASHINGTON, D.C. 20510

COMMITTEE ON FINANCE
COMMITTEE ON GOVERNMENTAL AFFAIRS
SELECT COMMITTEE ON INTELLIGENCE
COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS
SELECT COMMITTEE ON ETHICS

✓

1983 JUL 29 AM 10: 33

July 26, 1983

2KS/9

The Honorable Charles McC. Mathias
Chairman
Committee on Rules and Administration
305 Russell Senate Office Building
Washington, D.C. 20510

Dear Mac:

The attached letter indicates my feelings on procurement of computer equipment by the Rules Committee. It is crucial that we develop policies which will allow for efficient office operations and information management, and I do believe that a flexible policy is the best way to handle this particular situation.

Sincerely,

Dave

Dave Durenberger
United States Senator

DD/lak

375 RUSSELL SENATE OFFICE BUILDING, WASHINGTON, D.C. 20510, 202/224-3244

United States Senate
WASHINGTON, D.C. 20510

July 25, 1983

The Honorable Charles Mathias
Chairman
Committee on Rules and Administration
305 Russell Senate Office Building
Washington, DC 20510

Dear Chairman Mathias,

We are responding to your invitation in the June 27, Congressional Record for views on the procedures and criteria that should be used for the procurement of computer equipment by the Rules Committee.

First, we would like to commend the Rules Committee for recognizing the inefficiencies of present office automation equipment and for pursuing alternatives. The office automation pilot program has proven the need for office automation in the Senate for correspondents management as well as for information management.

The following is what we believe should be strongly considered by the Rules Committee during deliberations on procurement of an office automation system.

1) An Integrated Office System

The office automation system should not be limited to word processing capabilities but should include management and administrative capabilities such as tickler files, spread sheets, electronic mail systems, calendar management, etc. These tools will facilitate information flow and increase office efficiency.

2) A Multi-vendor System

This will allow each Senator the flexibility of choosing a vendor that will best meet the individual requirements of their office. In the interest of maintaining uniformity of equipment and facilitating intercommunication between offices, the system should include a small list of vendors that have been approved by the Rules Committee.

The Honorable Charles Mathias
July 22, 1983
Page Two

3) A Separate Office Automation Account

Each office should be given a separate budget to be used solely for the purpose of entering into a lease agreement with an approved vendor. This would allow each office to procure equipment that suits their individual needs and maintain state of the art in technology and software.

We would appreciate being kept abreast of any developments in the effort to bring office automation to the Senate and would also be interested in any comments you may have about our views on this matter.

Sincerely,

Gordon Humphrey

Dave Durenberger

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United States Senate
COMMITTEE ON APPROPRIATIONS
WASHINGTON, D.C. 20510

1983 AUG -9 PM 2:46

August 2, 1983

JKS
KC-JBC

The Honorable Charles McC. Mathias, Jr.
Chairman
Committee on Rules and Administration
Washington, D.C. 20510

Dear Senator Mathias:

The issue of small computers and their application in Senate offices is of considerable interest to me. I applaud the work of the Rules Committee in this regard, and I hope that you will continue to inform our colleagues in this area. The flexibility, convenience, and utility of such a system offers the very real potential for improving services to our constituents and for more effectively discharging our legislative responsibilities.

I look forwrad to further discussion on this subject.

Sincerely,

Tom

Thomas F. Eagleton
United States Senator

TFE/cjw

[illegible] Federal Building
210 Walnut Street
Des Moines, Iowa 50309
[illegible]

206 Federal Building
101 1st Street S.E.
Cedar Rapids, Iowa 52401
[illegible]

United States Senate
CHARLES E. GRASSLEY
135 Hart Senate Office Building
Washington, D.C. 20510
(202) 224-3744

320 Post Office and Court House Building
320 6th Street
Sioux City, Iowa 51101
[illegible]

210 Waterloo Building
531 Commercial Street
Waterloo, Iowa 50701
[illegible]

V

1983 AUG -5 AM 11: 19

JRS

August 2, 1983

The Honorable Charles McC Mathias, Jr.
Chairman
Committee on Rules and Administration
305 Russell Senate Office Building
Washington, D. C. 20510

Dear Mr. Chairman:

I welcome the opportunity to respond to your letter inviting me to offer my views on the use of word processing technologies in Senate offices.

The ideal office systems for the Senate would offer efficient state-of-the-art technology which performs necessary Senatorial services, while simultaneously encouraging personnel proficiency and satisfaction. Such systems, according to a myriad of recent managerial studies, would not only allow flexible response to the recipients of the services (constituents in the case of the U.S. Senate), but also would create a humane work environment.

I look forward to reviewing the results of the pilot study of office automation. The preliminary information which I and my staff have gathered suggests there exists a near-unanimous desire for more flexibility in obtaining advanced word processing capabilities. The study should raise valuable questions about the availability of reasonably-priced augmentations to our present system.

Advanced office automation could offer an invaluable step toward flexibility in managing the numerous daily activities of each office. Considering data systems now available in the private sector at ever-descending prices, the Senate must reassess the coordination of constitutent requests, legislation, scheduling, accounting, press, correspondence, intergovernmental actions, technical and information storage, and inter-office communication. Advanced word processing and office automation can reduce excess paperwork while improving administrative organization. Professional and clerical personnel alike could greatly benefit from improved record-keeping, editing and composing capabilities. Studies show that improved office automation saves considerable time, lessens work frustration levels, and improves creativity and efficiency.

Committee Assignments:
BUDGET
LABOR AND HUMAN RESOURCES
CHAIRMAN, Aging

FINANCE
CHAIRMAN, Oversight of the Internal Revenue Service;
Estate and Gift Taxation;
International Trade

JUDICIARY
CHAIRMAN, Administrative Practice and Procedure;
Immigration and Refugee Policy;
Constitution

SPECIAL COMMITTEE ON AGING

Regarding the question of the number of vendors that might be available to Senate offices, I would encourage the creation of a competitive atmosphere with multiple vendors. Such controlled competition would offer substantial cost and service quality benefits. Additionally, the selection of multiple vendors would probably assure that up-to-date hardware and software would be provided.

The issue of funding will undoubtedly be feverishly debated. I would encourage you to consider the option of procuring new systems through the office of the Senate Sergeant-at-Arms. In combination with the use of multiple vendors, such a central accounting and contracting structure could provide great leverage in purchases and service follow-up.

Technology can greatly serve the Senate and greater familiarity with office automation on the part of all staff and Members alike will help build a bridge with the future.

Sincerely,

Chuck
CHARLES E. GRASSLEY
United States Senator

CEG/cjm

Thanks for your consideration!

ORRIN G. HATCH
UTAH

125 RUSSELL SENATE OFFICE BUILDING
TELEPHONE: (202) 224-5251

HATCH HOT LINE 1-800-662-4300
(UTAH TOLL FREE)

United States Senate
WASHINGTON, D.C. 20510

COMMITTEES:
LABOR AND HUMAN
RESOURCES
JUDICIARY
SMALL BUSINESS
BUDGET
AGRICULTURE
OFFICE OF TECHNOLOGY
ASSESSMENT

1983 AUG 2 PM 12:00

✓

July 29, 1983

9v5/9v

Honorable Charles McC. Mathias, Jr.
Committee on Rules and Administration
United States Senate
Washington, D. C. 20510

Dear Mac:

In response to your letter of July 22, 1983, regarding the procurement of small computers for Senate offices, I would like to mention that I did sign a letter which originated from Senator Humphrey's office indicating a need for an integrated office system, a multi-vendor system, and a separate office automation account.

May I add to this that I feel it would be important that as these matters are considered that the committees be considered in conjunction with the personal Senate offices (for timeliness as well as uniformity.).

Thank you for your consideration of this matter.

Sincerely,

Orrin G. Hatch
United States Senator

OGH:11

CHIC HECHT
NEVADA

COMMITTEES:
BANKING, HOUSING AND URBAN AFFAIRS
ENERGY AND NATURAL RESOURCES

United States Senate
WASHINGTON, D.C. 20510

STATE OFFICES:
CARSON CITY OFFICE:
300 NORTH CURRY STREET
(702) 885-6111
LAS VEGAS OFFICE:
300 LAS VEGAS BLVD., SOUTH
(702) [illegible]-6005
RENO OFFICE:
300 BOOTH STREET
(702) 784-6007

1983 AUG 16 AM 11 00

August 15, 1983

JKS
XC: JBC

The Honorable Charles Mathias
Chairman
Committee on Rules and Administration
305 Russell Senate Office Building
Washington, D.C. 20510

Dear Mr. Chairman:

I am responding to your invitation of June 27th in the Congressional Record for views on the procedures and criteria that should be used for the procurement of computer equipment by the Rules Committee.

I appreciate the Rules Committee's efforts in addressing possible alternatives to our present automation equipment. I feel that there is just as great a need for information management as there is for correspondence management.

Therefore, I strongly believe the following suggestions should be considered during future deliberations regarding alternatives:

-- Office automation equipment should have not only word processing capabilities, but should also include management and administrative capabilities such as electronic mail systems, tickler files, spread sheets, calendar management, etc. These additional functions would greatly facilitate information flow and increase office efficiency.

-- Senators should have the ability to select a vendor from a small list of approved vendors. This would help facilitate the requirements of each senatorial office.

-- A separate budget could be set up (similar to the 10% budget) to be used to lease office automation equipment. This would allow each senatorial office flexibility in leasing automated equipment.

I would appreciate being kept informed of any developments in this effort to bring office automation alternatives to the Senate.

Sincerely,

Chic Hecht
Chic Hecht

CH:mpr

WALTER D. HUDDLESTON
KENTUCKY

COMMITTEES:
AGRICULTURE, NUTRITION, AND FORESTRY
APPROPRIATIONS
SELECT COMMITTEE ON INTELLIGENCE
SELECT COMMITTEE ON SMALL BUSINESS

United States Senate
WASHINGTON, D.C. 20510

1983 AUG -2 PM 3:01

July 29, 1983

Honorable Charles McC. Mathias, Jr.
Chairman
Senate Committee on Rules and
Administration
Washington, D.C. 20510

Dear Mr. Chairman

Thank you for your invitation to comment on computerization of Senate offices. Since my office has participated in three different office computer pilot programs, I believe that we have gained a great deal of experience which we would like to share with your Committee.

Insofar as word processing is concerned, the Wang system is by far superior to any that we have used. It is a powerful system that is easily learned and that has met with no staff resistance within the office. In fact, the limited number of staff who have access to the system strongly prefer it to their previous method of word processing.

The weakest links in the Wang system are the printer and general support. The printer, including the sheet feeder, has been the source of many problems that have drastically undercut the overall efficiency of the system. However, many of these problems have been compounded by the fact that the office has only one Wang printer. Due to the very limited budget provided for the pilot program, my office opted for an additional work station instead of an additional printer. The presence of a second, backup printer would lessen these delay problems.

General support, in the form of training and technical assistance from Wang, has not been especially good, and in many ways has been totally unacceptable. Wang has shown little or no interest in attempting to tailor the system or training to meet the unique needs of a Senate office. As a result, I have had to rely mainly upon my own staff to educate themselves in regard to many of the capabilites of the system. Since my staff has provided the staffs of the Rules Committee and the Computer Center with specific details, I will not take the time to discuss them here.

The exception to the general support problem is servicing of the equipment. Usually, repair personnel have shown up in a timely fashion and have corrected the problems promptly, at least for a while. I should point out, too, that the only equipment problem we have had has been with the printer.

The storage capacity of the Central Processing Unit (CPU) is not a defect in the equipment, but it is a weakness in our current system, since it is barely adequate for the limited number of terminals in my office. In order to fully utilize the system, we should have substantially more storage with a hard disk backup. The present system, which utilizes an 8 inch floppy disk backup, is inadequate for extended large scale use. Given the large volume of information that must be saved when the office is fully automated, it is imperative that the CPU have much more storage capacity, and Wang does offer systems with sufficient storage capacity.

If significant improvements could be made in these three problem areas, the Wang system would be outstanding and I would highly recommend it. However, without these improvements its overall rating suffers significantly.

Given the broad experience my office has had with word processing systems, I make the following recommendations to the Rules Committee:

1. The Committee should move immediately to provide a process whereby every office within the Senate has the use of a state of the art office computer system.

2. Each office should have a stand alone system which includes a full range of programs including word processing, spread sheet, calendar management, electronic mail system, telecommunicating capabilities, etc.

3. Each office system should be large enough to be utilized throughout the office. Ideally this would include a terminal for every staff person who has need of one, a CPU with sufficient storage to accommodate full, office-wide utilization of the system and sufficient printers to handle the workload and provide adequate backup.

4. Each office system should be able to communicate with the larger Senate computer systems in order to handle large volume mailings and access the legislative information services. Furthermore, the system should be able to communicate with smaller personal computers outside of the office. As you know, personal computers are widely used by many professional staff people and this type of communication ability would allow for maximum utilization of the system.

5. Each office should be allowed to choose its system from a variety of vendors because each office has its own unique needs and no two offices are administered in the same way. Only by allowing for choice will we assure that each office will have its individual needs met. Furthermore, it will assure that adequate support services are provided because a vendor will know that unless he provides needed support he can be easily replaced. My experience with Wang has demonstrated this very clearly.

6. Vendors should have their systems approved for use by Senate offices through a Senate approval system involving the Rules Committee and the Computer Center. This will assure that only those systems which meet basic standards will be used and that inadequate systems are not installed. Service, training and technical support should be key considerations in granting vendors approval. The pilot programs that are currently underway could be the basis for immediately establishing a list of qualified vendors.

7. Each office should be provided with sufficient funds to be used for leasing equipment from approved vendors. Much of these funds, and possibly all, would be offset by reduced use of other equipment such as typewriters and other supplies.

Since I have been in the U.S. Senate I have seen a steady increase in the paperwork burden placed upon Senate offices. Up to this point much of this burden has been met by increasing staff. However, we cannot continue to meet our needs in this fashion. State of the art technology offers us a way to provide faster and more efficient service for our constituents without adding to the size of our staffs.

The recommendations I have made would simply enable the United States Senate to operate in the same efficient manner as many private offices. In the long run I believe that it will be far less costly to do this than to continue to rely upon our currently outdated office systems.

I assure you that the Rules Committee will have my full support in bringing this new technology to the Senate.

Sincerely,

Walter D. Huddleston

United States Senate
WASHINGTON, D.C. 20510

July 25, 1983

The Honorable Charles Mathias
Chairman
Committee on Rules and Administration
305 Russell Senate Office Building
Washington, DC 20510

Dear Chairman Mathias,

We are responding to your invitation in the June 27, Congressional Record for views on the procedures and criteria that should be used for the procurement of computer equipment by the Rules Committee.

First, we would like to commend the Rules Committee for recognizing the inefficiencies of present office automation equipment and for pursuing alternatives. The office automation pilot program has proven the need for office automation in the Senate for correspondence management as well as for information management.

The following is what we believe should be strongly considered by the Rules Committee during deliberations on procurement of an office automation system.

1) An Integrated Office System

The office automation system should not be limited to word processing capabilities but should include management and administrative capabilities such as tickler files, spread sheets, electronic mail systems, calendar management, etc. These tools will facilitate information flow and increase office efficiency.

2) A Multi-vendor System

This will allow each Senator the flexibility of choosing a vendor that will best meet the individual requirements of their office. In the interest of maintaining uniformity of equipment and facilitating intercommunication between offices, the system should include a small list of vendors that have been approved by the Rules Committee.

The Honorable Charles Mathias
July 22, 1983
Page Two

3) A Separate Office Automation Account

Each office should be given a separate budget to be used solely for the purpose of entering into a lease agreement with an approved vendor. This would allow each office to procure equipment that suits their individual needs and maintain state of the art in technology and software.

We would appreciate being kept abreast of any developments in the effort to bring office automation to the Senate and would also be interested in any comments you may have about our views on this matter.

Sincerely,

Gordon J. Humphrey, USS

Bill Roth
William Roth, Jr., USS

Dave Durenberger
Dave Durenberger, USS

Malcolm Wallop
Malcolm Wallop, USS

George J. Mitchell
George J. Mitchell, USS

Carl Levin
Carl Levin, USS

Henry M. Jackson
Henry M. Jackson, USS

Warren B. Rudman
Warren B. Rudman, USS

Slade Gorton
Slade Gorton, USS

Roger W. Jepsen
Roger W. Jepsen, USS

Pete Wilson
Pete Wilson, USS

Nancy Landon Kassebaum
Nancy Landon Kassebaum, USS

Dan Quayle, USS

Bob Packwood
Bob Packwood, USS

Jeff Bingaman, USS

Orrin G. Hatch, USS

Chris Dodd
Christopher Dodd, USS

GORDON J. HUMPHREY
NEW HAMPSHIRE

531 HART SENATE OFFICE BUILDING
(202) 224-2841

NEW HAMPSHIRE TOLL FREE NUMBER
1-800-852-3714

United States Senate
WASHINGTON, D.C. 20510

COMMITTEES
ARMED SERVICES
Chairman: Subcommittee on
Preparedness
LABOR AND HUMAN RESOURCES
Chairman: Subcommittee on Alcoholism
and Drug Abuse
ENVIRONMENT AND PUBLIC WORKS
Chairman: Subcommittee on
Regional and Community
Development

October 28, 1983

The Honorable Charles Mathias
Chairman
Committee on Rules and Administration
305 Russell Senate Office Building
Washington, DC 20510

Dear Mac,

I appreciate the opportunity to share my views and personal observations on automation in the Senate. I am pleased you are taking steps to procure minicomputer systems for the Senate and I commend you for instituting the Office Automation Pilot Program.

Since May, my office has been equipped with a Digital Equipment Corporation computer system, more specifically a Vax-11/730 system with a layered integrated office system software package known as All-in-1. This system includes 11 terminals, 2 letter quality printers, and a matrix printer. The All-in-1 software package includes word processing, electronic mail, calendar management, electronic spread sheet, phone directory, tickler files, action lists, as well as other programming and form management capabilities.

I would like to stress that an office information system such as the one currently in my office is more than just a word processor. While word processing is an important improvement needed in Senate offices it is essentially a secretarial tool. Office information systems support not only the secretaries but they have additional capabilities which assist office administrators and improve personal productivity. I would like to highlight the importance of this distinction by describing how an office information system has improved the productivity of my office while at the same time improving the quality of the work environment.

The experience of my office is that the transition to automation can be made with little difficulty or inconvenience. Digital Corporation supplied my staff and I with thorough, on-site training classes taught by experienced instructors. Along with back-up documentation on the Office Information System, this training was vital in acclimating my staff to office automation. It wasn't long before

One Pillsbury Street
Concord, New Hampshire 03301
[illegible]

Federal Building, Room 730
275 Chestnut Street
Manchester, New Hampshire [illegible]
[illegible]

Federal Building, Room [illegible]
[illegible] Street
[illegible], New Hampshire [illegible]
[illegible]

157 Main Street
[illegible], New Hampshire [illegible]
[illegible]

staffers were using the computer to simplify many jobs that were previously done manually.

With the advent of the computer revolution, the term "user-friendly" has become quite well known. I have found that in the case of Digital All-in-1 software, user-friendly is an appropriate desription. The software is very self-explanatory and easy to use. It also comes complete with self-help functions that give the user instructions on how that software item functions. In addition, a toll-free phone number is provided whenever you have a problem that can't be solved with the "help" key.

As most, if not all, Senators know it takes hours, days and sometimes weeks for a memorandum to make its way from legislative staff to a Senator's desk. Electronic mail is a key function in an office information system which virtually eliminates the problem of delayed and lost memoranda. All memos in my office are handled through electronic mail. This enables me to receive and answer memos in a far more efficient and organized manner. No longer are stacks of memos piled high in inboxes on my desk or the desk of my Administrative Assistant. Electronic messages can automatically be copied, routed, and filed away. Nothing ever has to be retyped and the flow of paper is substantially lessened.

Our information system also allows us to easily find information which has been filed away. Incoming and outgoing electronic mail, word-processed documents, appointment calendars, and spreadsheets can all be filed automatically. These computer files are far more accessible than paper files. You need not remember how you filed a message to be able to find it. Files dating back over months can be found through a search of your files by subject, date, sender, or even by key words or phrases in the text of the file. These searches are done at high speeds and take little time.

Also with an information system you can store confidential information in your files and insure their confidentiality. Access to files can be controlled on an item-by-item basis. Nothing goes into a public file unless it is put their by the user that creates the file. Each individual user can decide who gets to see what, who has permission to read their files but not edit them, who has permission to copy files and to add, change, or delete material.

The word processing capabilities of the Office Information System are among its most useful features. Composing and producing letters and memos can often be a frustrating experience. First there is a struggle with the hand written draft. Then there is the long cycle of typing, correcting, and retyping. Inevitably, you have second thoughts or you find an omission, and the finished product doesn't look quite right. Word processing gives you the chance to create a document, file it, and then make changes to it as they become necessary. Changes are made in the computer, not on paper, so time savings are significant. Since the document is electronically filed, it can be retrieved instantly which also saves time. Because word processing is so easy to use all of my staff now type their own documents -- floor statements, press releases, letters or record statements. This virtually eliminates the typing burden on our secretarial staff thus allowing them to undertake more gratifying work such as constituent casework or special projects.

Getting busy legislative staff people together for a meeting used to be quite a task for our office. It use to take numerous intercom calls and attempts to track down each staff member. People were out of the office or away from their desk and could not be reached. Then, more often not, a meeting would be tentatively scheduled for a certain time and one person could not make it. The whole job had to begin again with much time and energy already wasted. Now, everyone in our office has a calendar which they keep up to date with their daily schedules. If you wish to schedule a meeting the system will automatically look at the calendars of all those you wish to attend and pick an open time for the meeting. Then, if you find the time suitable, you can send everyone an electronic mail message formally scheduling the meeting. The attendees can still decline to attend the meeting. You can check on the status of the meeting and if it appears that there will not be enough in attendence you can cancel the meeting and try to reschedule it.

Another important All-in-1 feature is the spread sheet software. This allows a user to make electronic calculations in seconds that usually take hours when done on a simple adding machine. This is of great help when preparing and reviewing office budgets because it lets you make "what if" calculations to project the effects of office expenditures.

Communication channels between our state field offices and our Washington office have been greatly improved. A terminal has been installed in our central state office in Concord, NH. and communicates with our CPU through CMS phone lines. This allows our New Hampshire staff access to the VAX system and enables messages and memoranda to be transmitted between the two offices. When my Administrative Assistant and I travel to the state we can access our Washington files thus eliminating the burden of carrying large stacks of papers back and forth from Washington to the home state.

In conclusion, the following is a reiteration of an earlier letter which I sent to you cosigned by 16 of my colleagues and is, based upon my personal experience with office automation, what I believe should be strongly considered by the Rules Committee:

1) An Integrated System

The office automation system should not be limited to word processing capabilities but should include management and administrative capabilities such as tickler files, spread sheets, electronic mail systems, calendar management, etc. These tools will facilitate information flow and increase office efficiency.

2) A Multi-Vendor System

This will allow each Senator the flexibility of choosing a vendor that will best meet the individual requirements of their office. In the interest of maintaining uniformity of equipment and facilitating intercommunication between Senate offices, the system should include a small list of vendors that have been approved by the Rules Committee.

3) A Separate Office Automation Account

Each office should be given a separate budget solely for the purpose of entering into a lease agreement with an approved vendor. This would allow each office to procure equipment that suits their individual needs and maintain state of the art in technology and software.

Sincerely,

Gordon

Gordon J. Humphrey,USS

UNITED STATES SENATE
WASHINGTON, D. C.

FRANK R. LAUTENBERG
NEW JERSEY

August 5, 1983

Mr. John K. Swearingen
Director, Technical Services
Committee on Rules and Administration
SR 318, United States Senate
Washington, D.C. 20510

Dear John:

Thank you for stopping by my office last week to talk about computerization needs of Senate offices. I am very interested in the pilot programs you have under study regarding electronic mail. Following approval by the Rules Committee, I will certainly look forward to that application for my office early next January.

I am leaving for Japan this weekend and will look forward to talking with you when I return to Washington after this recess period.

With best regards,

Sincerely,

Frank R. Lautenberg

FRL/lp

United States Senate
WASHINGTON, D.C. 20510

1983 JUL 26 AM 9 56

July 22, 1983

✓
9 KS/jr

The Honorable Charles Mathias, Jr.
United States Senate
358 Russell Senate Office Building
Washington, D.C.

Dear Mac:

In response to your invitation in the June 27th Congressional Record, I would like to share my views concerning the procedures and criteria used for procurement of computer equipment for use by Senators.

I want to thank the Committee on Rules and Administration for introducing the Office Automation pilot. Alternatives to the current services provided to Senators need to be tested and evaluated. I am very pleased to be a part of such a test.

I submit the following for the Committee to consider when determining computer equipment procurement procedures and criteria.

1. Office Automation System is defined as an integrated system, the components of which can function independently or as part of a larger network. Components may be added to the basic system as the individual office's needs expand.

   System standards shall allow for communication, if desired, between various systems and offices.

2. Systems Applications include:

   a. Word/Text processing system that can, if desired, interface with the CMS replacement.

   b. Mailbox/Messaging capability.

   c. Schedule/Calendar management for the Senator and staff.

   d. File management and tickler file.

   e. Spread Sheet for internal office financial management.

   f. Communications features.

3. Approved List:

An Approved List containing several (4 - 6) vendors shall be established from which Senators can select a vendor and system.

Vendors qualify for the Approved List by satisfying standards set as a result of the findings from the Office Automation Pilot. Vendors are placed on the Approved List through open and competitive bidding.

4. Funding:

Leasing of the computer equipment shall be paid for from the Office Expense Account (OEA). The OEA shall be increased by an amount calculated using a fair and adequate formula determined by the Committee on Rules and Administration. These funds may only be used for the lease of computer equipment or services.

(I suggest the Committee consider the value of equipment replaced by the computer system and returned to stock, such as memory typewriters, mag-card units, and Selectric typewriters. The dollar amount trade-off would be used as one of the variables in the computer equipment funding formula.)

5. Management:

Senate offices shall enter into a contractual agreement with the Vendor chosen from the Approved List. This agreement shall include maintenance, training and management. Offices shall deal directly with the Vendor for any assistance and service required.

The Committee on Rules and Administration and the Sergeant at Arms shall provide assistance and advice to the offices as requested by the offices.

I appreciate the opportunity to express my views to the Committee. Please inform me of any developments regarding information processing in Senate offices.

Sincerely,

Jim McClure

James A. McClure
United States Senator

McC:ml

JAMES A. McCLURE
IDAHO

United States Senate
WASHINGTON, D.C. 20510

[illegible]

August 1, 1983

The Honorable Charles McC. Mathias, Jr.
Chairman
Committee on Rules and Administration
United States Senate
Washngton, D.C. 20510

Dear Mac:

Thank you for the opportunity to participate in the Office Automation Pilot. I appreciate the opportunity to express my views to the Committee. Attached is my evaluation.

The computer systems have been well received by my staff and they are eager for additional equipment and applications.

I trust the information provided will assist the Committee in determining a policy satisfactory to the majority of the offices.

Again, thank you for including my office in this important and timely test. I look forward to working with you in the Rules Committee to further the productive capabilities of our Senate offices.

Sincerely,

James A. McClure
United States Senator

McC:ml

EVALUATION OF THE OFFICE AUTOMATION PILOT

SENATOR JAMES McCLURE

AUGUST 1, 1983

In spite of the $2,000 per month lease limit, the Office Automation Pilot has been and continues to be a successful word processing installation in Senator McClure's office. The $2,000 per month constraint, however, has severely limited our ability to fully explore data/word processing systems to our satisfaction. The computer equipment and software that can be provided for $2,000 per month is simply not adequate to meet either our short term or long term goals.

The Office adapted to the equipment quickly and staff continues' to be eager to use the system. The Vendor has been supportive and anxious to satisfy any requests for advice, assistance or additional services. The Committee on Rules and Administration and the Computer Center have provided assistance and advice when requested.

GOAL/APPLICATIONS:

Short Term:

General word processing, management of the Senator's schedule, and Office financial management. Communications between the Idaho office(s) and D.C.

Long Term:

Central storage and retrieval facility for common information accessible by all six district offices in Idaho and by all user sites in the D.C. office. Historical and long term management of the Senator's schedule accessible by Idaho and D.C. staff. Messaging capability among users. Calendar management for staff.

OBSERVATIONS:

1. Since the installation, there has been a marked increase in staff efficiency and better use of staff time. This increase in efficiency is difficult to measure, but the change is indeed noticeable. Staff is less resistant to edit documents, final copy is much cleaner, and turn-around time is improved.

2. The Office was scheduled to meet once a week with the Rules Committee and the Computer Center representatives. The intent of the meetings was to evaluate and examine the Office's use of the system. The meetings were 10 to 15 minutes long and lacked focus and purpose. The last meeting was June 27. It is difficult to understand how Rules Committee and the Computer Center can submit a recommendation regarding the computer equipment needs of Senator's offices, given the lack of involvement. The Office staff has been the most active and creative with the system during the last five weeks which would have been an excellent time for an in-depth evaluation.

3. It is difficult to conduct a fair evaluation of the entire pilot considering the diversity of the configurations installed in each office. In some situations, the pilot has been compromised by Vendor generosity. The $2,000 limit has not been strictly adhered to in some offices, thus skewing test results.

CONFIGURATION:

After discussions with the Vendor, it was determined that for $2,000 per month, stand-alone word processing systems would best satisfy the short term goals of the Office. Seven units were installed; six in the D.C. office and one in the Boise district office.

A central processing unit capable of handling numerous users simultaneously was actually needed. However, our options were severely limited by the $2,000 per month cap.

EVALUATION - SENATOR McCLURE'S OFFICE:

No formal change in the Office management was required to effectively incorporate the systems into the Office structure. Systems were tested in various divisions during the first several months of the pilot. Systems were relocated if the usage level warranted. Staff has made good use of the system and has willingly pursued additional applications.

Location and application of each unit is as follows:

SYSTEM 1: Administrative Assistant's Office: Uses the communications feature, word processing, list processing, and the spread sheet. One active user, two moderate users.

1. Communications Feature: Uses CTS, LEGIS, & SCORPIO. Communicates with the Idaho office...sends and receives the Senator's schedule, letters, memos, etc.

2. Word Processing: Letters, reports, forms, and Senator's schedule.

3. List Processing: Office lists, staff rosters, and applicant tracking.

4. Spread Sheet: Office financial management, personnel vacation and leave management.

SYSTEM 2: Press Office: Uses communications feature, word processing and list processing. Two active users and one moderate user.

1. Communications Feature: Communicates text data to the Boise office, especially press releases, op eds, and news letters.

2. Word Processing: Produce camera ready copy for press releases, op eds, and mailings. Heavy editing and layout management.

3. List Processing: Not yet in use, but press staff intend to fully utilize the list processing function.

SYSTEM 3: Legislative Room: Uses word processing, list processing. One active user - legislative correspondent.

1. Word Processing: Letters (stored repetitive letters and items), speeches, reports, floor statements. Heavy editing of documents.

2. List Processing: Generates small lists to merge with repetitve letter.

SYSTEM 4/5: Legislative Room: Uses word processing, list processing. Three active users - two legislative assistants, one legislative correspondent.

(SAME AS SYSTEM 3)

SYSTEM 6: Legislative Room: Word processing and list processing. One active user - legislative correspondent.

(SAME AS SYSTEM 3)

SYSTEM 7: Boise District Office: Communications feature, word processing, list processing, and the spread sheet. One active user, five queuing up.

1. Communications Feature: Ability to access CTS, LEGIS, SCORPIO. Communications with the D.C. office.
2. Word Processing: Letters, reports, memos, Senator's state schedule.
3. List Processing: Office lists.
4. Spread Sheet: Has not yet utilized the spread sheet; however, the district office intends to use the spread sheet for financial management.

PROBLEMS:

Lack of Terminals:

The major problem is the lack of systems and terminals that the $2,000 per month limit provides. Considerable time is spent waiting for access to a terminal and queuing up for the opportunity to use the system. The majority of the staff would prefer having a terminal at their work station, or at least, shared with one other staff member. More work could be done and applications developed with more terminals and/or systems.

Storage Capacity:

As use of the system increased and the Office staff became a more sophisticated user, it was soon revealed that the 5 1/4 inch floppy disk is not the appropriate storage medium. Staff has commented on slow response time as the disk gets fuller. A main storage facility is preferable.

Disk Longevity:

To date, there have been two occurrences of a disk crashing. Some data was lost. Data on the bad disk had to be recovered and stored on a different disk.

VENDOR

Given the time constraints and contract deadlines, the Vendor performed admirably. Being a newcomer to data processing, initial conversations with the Vendor demonstrated a communications problem which eventually was overcome. It was difficult, at first, for the Office to describe to the Vendor what the goals of the Office were. The Vendor implied capabilities that have yet to come to fruition; as for example, scheduling.

Installation:

The installation was timely and went smoothly. No major difficultites occurred. The Vendor worked well with the Senate Computer Center to install the communications feature.

Training:

The word processing training provided by the Vendor was more than adequate. Word processing training was held in the Office for the entire staff. The Vendor made sure that every user was fully trained in word processing.

The Vendor failed to provide training for the other applications, such as, the spread sheet. Manuals were provided, but so far, no instructor training or support for specialized applications.

Support and Maintenance:

After installation, the Vendor provided generous support. Requests for training, maintenance and advice were satisfied quickly and adequately. Staff feels free to contact the Vendor with any questions, and is encouraged to do so.

Staff has complained several times about how difficult it is to get through on the Vendor's "800 Number" (support number). Some times, staff has had to wait for 15 minutes to get through to a support person. A message can be left with the "800 Number" and then staff must wait for a return call.

If there is a problem with the hardware, the problem must be logged in through the "800 Number" before a repairman will respond. This has resulted in 24 hour turn-around for hardware repairs.

COMMITTEE ON RULES & ADMINISTRATION

Once the Office Automation Pilot was initiated, the Office had little contact with Rules Committee. The Committee provided adequate guidelines for dealing with the Vendor and assisted with contract negotiations.

After being notified that Digital Equipment Corporation (DEC) was assigned to the Office, Rules Committee requested that contract negotiations and equipment selection be accomplished within two days. The time requirement was unrealistic and required that the Office and the Vendor complete an applications analysis and negotiations in two days ... a process which ordinarily takes several weeks. A comprehensive analysis of the Office's needs and goals should have been completed before equipment selection. This has resulted in some applications being overlooked or underrated, and consequently, not adequately met.

A representative from the Committee was assigned to the Office as an observer. The representative participated in the scheduled weekly meetings with the Office and the representative from the Senate Computer Center.

COMPUTER CENTER

A representative from the Senate Computer Center, Educational Services Section, participated as an observer during the initial meetings with the Vendor and the Office. Once the systems were installed, little dialogue was necessary between the Senate Computer Center representative and the Office. The Senate Computer Center representative also participated in the weekly scheduled meetings.

There appeared to be a lack of coordination among several divisions of the Computer Center. Instructions were not passed on to the appropriate division or person. For example, the cabling needs and locations were determined several weeks before installation but was not installed on time.

At the beginning of the installation, the Senate Computer Center dropped off "Equipment Problem Logs" to assist with their evaluation. They have yet to be picked up.

The Senate Computer Center representative has provided supplies and resource information. The Senate Computer Center representative is concerned about the pilot and is anxious to see it succeed.

A Senate Computer Center technical person was assigned to the Office to assist with the communications installation and did a commendable job.

FINDINGS:

The processing power, storage facility, number of terminals, and specific applications necessary to satisfy the needs of a Senator's personal office cannot be adequately provided for with a monthly lease limit of $2,000 per month.

RECOMMENDATION:

The following is recommended:

1. Integrated data processing systems which support multi-functions shall be made available to Senator's office. The components of these systems can function independently or

as part of a larger network. Components may be added to the basic system as the individual office's needs expand. System standards shall allow for communication, if desired, between various systems and offices.

2. Systems applications shall include:

   a. word/text processing;
   b. schedule and calendar management;
   c. mailbox/messaging capability;
   d. file management and tickler file;
   e. spread sheet; and
   f. communications feature.

3. An Approved List containing several (4 - 6) vendors shall be established from which Senators can select a vendor and system.

   Senate offices shall enter into a contractual agreement with the Vendor chosen from the Approved List. This agreement shall include maintenance, training and management. Offices shall deal directly with the Vendor for any assistance and service required.

4. Leasing of the computer equipment shall be paid for from the Office Expense Account (OEA). The OEA shall be increased by an amount calculated using a fair and adequate formula determined by the Committee on Rules and Administration. These funds may only by used for lease of computer equipment or services. The Office may use its descretion and use other funds at its disposal, if additional funds are necessary.

   The formula should take into consideration the value of equipment replaced by the computer system and returned to stock. It is difficult to suggest a trade-off value given the various procurement methods. From figures provided by the Sergeant-at-Arms (Selectric III - $740; Memory typewriter - $3,800; Qyx - $4,500; Hazeltine terminals - $400 to $1,000) it appears that some trade-off value does exist.

Answered 11/1/83

DON NICKLES
OKLAHOMA

United States Senate
WASHINGTON, D.C. 20510

COMMITTEES:
ENERGY AND NATURAL RESOURCES
LABOR AND HUMAN RESOURCES
SMALL BUSINESS

8317

1983 OCT 11 PM 4: 10

October 7, 1983

The Honorable Charles McC. Mathias, Jr.
United States Senate
Washington, D.C. 20510

Dear Mac:

We the undersigned wish to express our strong interest in obtaining word processing and personal computer equipment for our offices.

It is our understanding that 10 Senate offices have already been designated by Rules for a demonstration project, and are currently enjoying the use of such equipment. We would very much like for our offices to be given a similar opportunity to test various small computer systems.

These new systems will enable our offices to work more productively and provide better service to our constituents. We urge you to approve the extension of the demonstration project to our offices.

Sincerely,

Charles H. Percy
CHARLES PERCY

Don Nickles
DON NICKLES

Roger W. Jepsen
ROGER JEPSEN

ALAN SIMPSON

Jake Garn
JAKE GARN

Barry Goldwater
BARRY GOLDWATER

Paula Hawkins
PAULA HAWKINS

BOB PACKWOOD, OREG., CHAIRMAN
BARRY GOLDWATER, ARIZ. ERNEST F. HOLLINGS, S.C.
JOHN C. DANFORTH, MO. RUSSELL B. LONG, LA.
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LARRY PRESSLER, S. DAK. WENDELL H. FORD, KY.
SLADE GORTON, WASH. DONALD W. RIEGLE, JR., MICH.
TED STEVENS, ALASKA J. JAMES EXON, NEBR.
BOB KASTEN, WIS. HOWELL HEFLIN, ALA.
PAUL S. TRIBLE, JR., VA. FRANK R. LAUTENBERG, N.J.
WILLIAM M. DIEFENDERFER, CHIEF COUNSEL
RALPH B. EVERETT, MINORITY CHIEF COUNSEL

✓

United States Senate
COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION
WASHINGTON, D.C. 20510

1983 JUL 29 AM 10 53

July 28, 1983

9F/9

The Honorable Charles McC. Mathias, Jr.
Chairman
Committee on Rules and Administration
United States Senate
Washington, D.C. 20510

Dear Mac:

In response to your letter of July 22 (and in addition to the views expressed in Senator Humphrey's letter that I have cosigned), let me express my strong support for the expansion of Senate computer services within the personal offices. Although I am hardly a computer aficionado, I do believe that both intra-office efficiency and effectiveness of our ability to communicate with our constituents require the Senate to enter the computer age.

In my office, we presently use five different systems, each of which is limited in scope and accessibility. The Alto-Bravo, which is only available to us in the Computer Room in Dirksen, is an excellent system but it is frequently out of commission, as is the situation at this time. We use it for a great variety of documents, very few of which can be done as satisfactorily on any other system, but the technical problems seem intractable, and access is difficult due to the heavy demands on the small number of terminals in the Senate.

The ATMS is our most accessible and versatile interactive system. Personal staff in the press, legislative and administrative sections all use it for various documents, but unfortunately, it is a difficult, unwieldy and cumbersome system. The fact that only a few members of the staff can be appropriately trained on ATMS makes the services rendered minute compared to what is needed. Additionally, we use the CMS system for mail response; the Scorpio and Legis systems for bill retrieval; and the UPI news service.

The Honorable Charles McC. Mathias, Jr.
July 28, 1983
Page two

I would like terminals at various desks, particularly my own, and printers in each office so that I could access information from various stored lists. Additionally, I would like connection with my Oregon field office so that at both ends (regardless of where I find myself) we can communicate instantaneously.

I need much better word processing capabilities than the ATMS provides, since I often draft and redraft speeches, testimony, floor statements, etc. Often, too, I plug in paragraphs from various prior documents, a process that could be done instantaneously, instead of laboriously, were this capability easily available. Others on my staff would use this service as well, but have found the ATMS system time-consuming and difficult to learn, and only a few are able to use it effectively.

Additionally, I am distressed by the limitations of our current CMS system. We tried modifying the system to use it in scheduling, for example, but have given up the exercise. There are a number of other administrative uses any office would make of an efficient system.

I appreciate your consideration of these views, and would be glad to discuss this matter with you further. I look forward to the decision of the Rules Committee.

Cordially,

Bob

BOB PACKWOOD

BP/ssj

ROBERT T. STAFFORD
VERMONT
WASHINGTON OFFICE:
[illegible] SENATE OFFICE BUILDING
TEL. (202) 224-5141
VERMONT OFFICES:
27 SOUTH MAIN STREET
RUTLAND, TEL. [illegible]
1 MAIN STREET
CHAMPLAIN MILL—4TH FLOOR
WINOOSKI, TEL. 951-6707

United States Senate
WASHINGTON, D.C. 20510

1983 JUL 27 PM 2:43

COMMITTEES:
ENVIRONMENT AND PUBLIC WORKS, CHAIRMAN
LABOR AND HUMAN RESOURCES
EDUCATION SUBCOMMITTEE, CHAIRMAN
VETERANS' AFFAIRS
NEAL J. HOUSTON
ADMINISTRATIVE ASSISTANT

July 25, 1983

Rules Cttee.

JKS/cp

Honorable Charles McC. Mathias, Jr.
Chairman
Committee on Rules and Administration
United States Senate
Washington, D. C.

Dear Mac:

To insure that my interest has been noted, I am responding to your letter of July 22nd regarding small computers.

I am anxious to see the program implemented and the equipment made available to the individual offices in the immediate future.

I look forward to learning of the developments.

Sincerely yours,

Robert T. Stafford
United States Senator

RTS/kbm

MARK O. HATFIELD, OREG., CHAIRMAN

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DALE BUMPERS, ARK.

J. KEITH KENNEDY, STAFF DIRECTOR
FRANCIS J. SULLIVAN, MINORITY STAFF DIRECTOR

United States Senate
COMMITTEE ON APPROPRIATIONS
WASHINGTON, D.C. 20510

July 29, 1983

The Honorable Charles McC. Mathias, Jr.
Chairman
Committee on Rules and Administration
United States Senate
Washington, D.C. 20510

Dear Mac:

Thank you for inviting me once again to share with the Committee my thoughts on computers for our personal offices. In the almost two-year interim since I testified on this subject, my office as been participating in pilot tests with both the personal, microcomputer and with the word processors. I am happy to share with the Committee my observations on our experience with these computers.

PERSONAL COMPUTERS

We have found the personal computers to be excellent, versatile tools that we've used in a number of applications, including payroll and office expense budgeting, record keeping, correspondence tracking and even tallying our newsletter questionnaires. We've also used these microcomputers for limited word processing, primarily for electronic mail purposes. I am particularly encouraged with the initial success we've had with our portable, battery-operated computer. It has proven beneficial when traveling and is easy to operate.

Our greatest problem with the microcomputers has been training the staff to use them and to use the various software programs available. The vendor provided some training support when the computers were acquired, but we've had to find other help for training new staff on the equipment. Another problem we've found is that the software programs are not compatible in many instances, requiring an operator to relearn the equipment.

Overall, though, the personal computer has been an asset to my office operations.

WORD PROCESSORS

The IBM Displaywriter System that we have been using since the beginning of this year substantially improved our mail production capability. The staff that have been using the equipment are very enthusiastic about its many features and some have claimed their typing speed has improved 20%. I am very satisfied with the printer quality of the system (the letters look like they were typed on a regular typewriter.)

The communications feature on these word processors enables the legislative correspondents to access Legis and Scorpio in addition to composing letters. It also permits these units to communicate with other terminals, such as other personal computers.

The support we've received from the vendor for training and operations has been satisfactory. The downtime of the equipment has been minimal. My disappointment with the Displaywriter System is its inability to process a large number of records. Based on the vendor's guidance, I had planned to keep our active mailing list on disks, and track correspondence with this equipment. However, this plan was abandoned after it proved to be too slow a procedure. We are currently exploring a different system to do correspondence tracking and maintenance.

GENERAL COMMENTS

Although my office has experienced initial success with the computer equipment we are testing, the total office operation remains cumbersome because word processing is being done on a variety of equipment. In addition to the five Displaywriters and two Apple computers, staff are using System 6 terminals, Mag Card typewriters, Memory typewriters, a Quix typewriter, and Selectric IIs and IIIs to produce letters and other material. This requires much unnecessary paperwork and re-keying of information. The ideal situation would have all staff on a similar piece of equipment.

I understand there may be a possibility of testing a different IBM System that involves a minicomputer tied into a number of terminals. This type of an arrangement would be an improvement over the present system, I believe.

While I understand the reason for containing the cost of this pilot test, the $2,000 per month limit has necessitated some less-than-optimal configurations for the test of the Displaywriter. For instance, two of our terminals have a program that is slower and not compatible with the other three. Also, one of the two printers is considerably slower than the other. A more realistic ceiling on lease arrangements for office systems should be considered by the committee.

Paperwork would be greatly reduced if all Senators' offices, committees, and Senate support offices had computers and were on an electronic mail system. For instance, a "Dear Colleague" could be distributed instantly to all 100 offices, CRS requests could be made more efficiently, and newsletter and column copy could be delivered electronically to Senate Service Center bypassing the present bottleneck at the overworked composing section. There is a request pending before the Committee for a number of offices to pilot test an electronic mail service.

I compliment the Committee for pushing ahead with the office automation test, and believe the results will show we can run our offices more efficiently and more cost-effectively with computer equipment.

With best wishes,

Cordially,

TED STEVENS

JOHN W. WARNER
VIRGINIA

United States Senate
WASHINGTON, D.C. 20510

ARMED SERVICES COMMITTEE
Chairman, Strategic and Theater Nuclear Forces
Subcommittee

ENERGY AND NATURAL RESOURCES COMMITTEE
Chairman, Energy and Mineral Resources
Subcommittee

RULES AND ADMINISTRATION COMMITTEE

JOINT COMMITTEE ON THE LIBRARY OF CONGRESS

1983 AUG 25 PM 2:58

August 22, 1983

The Honorable Charles McC. Mathias, Jr.
Chairman
Committee on Rules and Administration
U. S. Senate
Washington, D.C. 20510

Dear Mr. Chairman:

Thank you for the invitation to write concerning my staff's observations on the WANG system recently set up in my office.

Overall, we have found the WANG to increase efficiency and decrease both typing and filing time. There have been some mechanical problems; however, much of the initial difficulty seems to have been resolved.

I have enclosed a list of observations from those who operate the system for your additional information. Thank you for the opportunity to comment.

With best regards, I am

Sincerely,

John

John W. Warner

JWW:slw

Enclosures

MEMO TO: Joy Manson

FROM: Barbara Gallo

DATE: August 18, 1983

SUBJECT: Observations on Wang System

In accordance with your request for our observations on the newly installed computer system, the survey which was taken among the four operators on our staff breaks down as follows:

PRO:

The merge function is absolutely irreplaceable as an efficiency tool.

Obvious abilities to edit quickly and easily is extremely good for our office as we have many "redo's".

Capability of filing a document under several headings makes for easy indexing and reference.

Decreases the size of the hard files.

News releases and speech text transcriptions easily interchangeable by changing format, copying, and repaginating.

Transcribing from tapes is quicker/no carriage return or paging.

Centering and indent features, ability to change formats in the middle of a document, especially useful.

Overall, having a computer is a great time-saving and efficient device. Now to the--

CONS:

Initial training at Wang headquarters could be improved.

Response time on repairs ranging anywhere from two hours to two days.

Phone calls are returned on the same efficiency level.

But the major harangue of all--without exception--is the sheet feeder. Its design is faulty; curls the edges of the paper, which in turn jams in the roller. The hand feeder has no less problems; it must be fed by hand with almost every sheet of paper. It's rather a shame that a super high-tech piece of equipment is spoiled by something so radically simple to replace or improve.

As a final note, we did seem to have gotten a "lemon" in legis, but after innumerable breakdowns, convinced Wang to replace the system ("brains"), which they did.

Overall, everyone is glad to have a computer.

APPENDIX J

"PERSONAL COMPUTERS IN THE CORPORATE ENVIRONMENT"

FROM THE WEEK IN REVIEW

SEPTEMBER 9, 1983

**Deloitte
Haskins+Sells**
USA

[illegible]

83-36 September 9, 1983

Management

PERSONAL COMPUTERS IN THE CORPORATE ENVIRONMENT

In a recent issue of ***Director's Monthly*** magazine, DH&S Partner **Trevor R. Stewart** discusses the proliferation of microcomputers in the business environment and the need for standardization, support and guidance from corporate management. Some excerpts:

> ***"Personal computers are doing for people's minds what machines did for their bodies at the beginning of the industrial era."***

In many corporations, perhaps in yours, personal computers are springing up in the most surprising places, like mushrooms after the rain. They are inexpensive and they can be used for a rich variety of applications—electronic spreadsheets, word processing, job scheduling, records management . . . the list is endless. Anyone with a little imagination can justify and, if necessary, bury the cost of a personal computer. Circumventing the corporation's traditional channels for authorizing the purchase of data processing (DP) equipment has become a game played with increasing enthusiasm by those who have discovered the remarkable power of today's personal computers. This has led in many cases to a confrontation between personal computer users and the traditional DP department.

Users relish their newfound independence from traditional DP and their ability to do many things that they were not able to do before, with or without traditional DP. They are right. DP professionals, however, see this as an erosion of their authority and special status. More importantly, they are perturbed to see a new breed of amateurs plunging enthusiastically and innocently into the same mistakes that DP'ers made 20 years ago. DP professionals, too, are right. Some of the DP departments' concerns:

- **Lack of standardization as users buy whatever they think best serves their needs. This will lead to an inability of users to communicate.**
- **Lack of basic DP disciplines, such as backup procedures and documentation.**
- **Proliferation of private data bases that duplicate the mainframe data bases of the company.**
- **Development of badly written programs that are circulated and misused by others.**

There is a way to reconcile the needs of users with the legitimate concerns of the DP professional. But before any progress can be made, one fact has to be recognized: personal computing is here to stay. A company policy that attempts to suppress it is doomed to failure.

Sooner or later the users of personal computers in an organization want to share the programs they have developed or the data that they have gathered. For this reason, if for no other, you should seriously consider standardizing on at least a limited range of hardware. There are many factors to consider in selecting hardware. Here are some of them: (1) Technical quality of the equipment. A company should probably select from the newer 16-bit machines rather than the older 8-bit machines. (2) Availability of software. The fastest, most powerful computer in the world is useless without the programs that make it do something useful. (3) Financial stability of the manufacturer. (4) Price—in today's market a good business oriented personal computer can be purchased for $3,000 to $6,000. For this you should get at least 128K of internal memory, a CRT display, two diskette drives, and a printer.

There are also advantages in some standardization of certain basic software packages. For example, if everyone uses the same word processing package, then not only is there a sharing of the educational experience but also users will be able to share documents. There are many advantages to standardization besides the compatibility of applications from one machine to another. Education, both formal and informal, will be less expensive. Communications between the personal computers, and between the personal computers and the company mainframe, will be done in a standard way. Also, your company may be able to obtain corporate discounts on purchases and service contracts.

"We are now able to tackle a problem without having to worry unduly about how long it will take to calculate the answer."

A group of individuals with experience in both large computer systems and personal computers should be involved in establishing guidelines for using personal computers and monitoring progress. The DP department should play a role in this, particularly in the area of hardware coordination and software acquisitions. A key function of such a group would be identifying suitable software for users and recommending development of software in situations where it is not commercially available. There is now so much software available in the marketplace that the need to develop something from scratch should seldom arise. The software that is selected should be proven and reliable, requiring minimal technical support.

Some companies already using personal computers have established a corporate "computer store." This is the central purchasing and support location for personal computer users. It generally provides training, arranges for quantity discounts on purchases of hardware and software, arranges for local service at remote locations, and has one or more individuals available to answer questions and give advice. Some companies have also established "user groups." These groups are generally informal and members exchange information on using their computers more efficiently. Some even publish a regular newsletter.

In this information age, personal computers are doing for people's minds what machines did for their bodies at the beginning of the industrial era. Machines freed people's bodies from dangerous, backbreaking work. Computers are freeing our minds from many tedious, trivial tasks. To a large extent we are now able to tackle a problem without having to worry unduly about how long it will take to calculate the answer. The potential of personal computers, the tools of the mind, is limited only by the imagination of the people who use them.

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APPENDIX K

CRS SUMMARY OF RULES COMMITTEE HEARING ON OFFICE AUTOMATION, DECEMBER 8, 1982

Congressional Research Service
The Library of Congress

Washington, D.C. 20540

January 20, 1983

TO : Senate Committee on Rules and Administration
Attention: Anthony Harvey

FROM : Jane Bortnick JB
Specialist in Information Science and Technology
Science Policy Research Division

SUBJECT : Hearing on Computers and Communications

The attached report has been prepared in response to your request for a summary of the key issues raised in the committee's hearing on computer and communications service and technology. The report identifies the major topics discussed by witnesses, including the pace of technological development; the need for a systems approach; training, service, and security; and costs and benefits. Relevant statements by witnesses on these issues are included.

I hope that this report provides assistance to the committee in its evaluation of new computer and communications services. If I can provide any further information, please contact me at 287-7073.

Attachment

JB(GHM)sw

Congressional Research Service
The Library of Congress

Washington, D.C. 20540

KEY ISSUES RAISED IN HEARINGS ON COMPUTERS AND COMMUNICATIONS

Jane Bortnick
Specialist in Information Science and Technology
Science Policy Research Division

January 20, 1983

KEY ISSUES RAISED IN HEARINGS ON COMPUTERS AND COMMUNICATIONS

INTRODUCTION

On December 8, 1982, the Chairman of the Senate Committee on Rules and Administration, Senator Charles McC. Mathias, Jr. convened a hearing on computers and communications "to advise the Committee in formulating plans for computer and communications services to the Senate over the next several years." (1)* The witnesses, including Senators and representatives from the data processing and telecommunications industry, addressed the question of how best to employ the new information technologies to serve the needs of the Senate. As Senator Mark Hatfield noted, this task is compounded by the fact that:

> The United States Senate is a unique institution. On the one hand, we are similar to one hundred separate small businesses with all the needs for computer technology of a typical small business; on the other hand, we represent one large institution whose needs for computer technology remain rather constant while the individual officeholders change constantly. (7)

Despite the unique environment of the Senate, however, witnesses were able to identify key issues which the Senate may wish to consider in its evaluation of enhanced computer and communications systems. Among these topics are the pace of technological development; the importance of taking a system's approach; the problems of training, service, and security, and costs versus benefits of new technology. Although various witnesses recommended specific approaches and identified various technological avenues which may be pursued, there was a general consensus on the value that information technology could have when applied effectively to Senate operations.

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* Numbers refer to the pages in the hearing transcript.

PACE OF TECHNOLOGICAL DEVELOPMENT

Developments in data processing and telecommunications are expected to continue to expand at a rapid rate according to industry experts. Of particular importance, witnesses noted the influence of the microprocessor. Mr. Jonathan Weinberg of Dialcom, Incorporated stated that the microprocessor "is now allowing cost-effective equipment, very small and portable, to be available at prices that were unheard of many years ago." (119) In addition, a number of witnesses commented on technological improvements which are significantly enhancing office automation. Included are developments in local area networks (LANs), which Mr. Lawrence Seligman, Executive Vice President of Datapoint Corporation noted provide for "very high speed interchange of information among a group of computers or terminal devices" (87) and digital private branch exchanges (PBXs), which allow for "more efficient utilization . . . of the wiring for your telephone system so it can be used both for voice and for data," according to Mr. Jack Davis, Senior Vice President of Harris Corporation. (42)

Of particular importance, Mr. Vico Henriquez, President of the Computer and Business Equipment Manufacturers Association, commented on the "blending of information processing and telecommunications functions." (48) The merger of these capabilities provides not only enhancements of existing functions, but most importantly creates a whole array of new systems and services. As Mr. Davis explained:

> The 1980s will probably be known as the era of functional integration, the era in which computing, data processing, word processing,

> and communications were brought together into a truly integrated information processing system. During this time frame, you will be able to input, review, retrieve, and modify all types of information, text, data, voice, video possibly from a single multi-function desktop device. This increased capability is achievable because of the higher level of integration and power which has been made possible by a computer or a chip technology and because of enhanced communication interfacing techniques which we call local area network. (30-31)

The explosion of new automated devices and the array of systems now available is not without its drawbacks as well. For one, Mr. Henriques stated that making the correct procurement decisions may be complicated by "understanding what is available and choosing the right combination for the particular set of needs that a user may have." (48-49) Furthermore, as Mr. Stuart Miller, Vice President and General Manager of Sperry-Univac noted, the "pace of change in technology has been so fast that some organizations are literally scrambling to apply the technology as fast as possible . . . . They have in the main had a piecemeal effect on office information with just as many negative effects in my opinion as positive effects." (59-60)

SYSTEMS APPROACH

Recognizing the numerous pitfalls involved in selecting and implementing office automation, all witnesses emphasized the critical importance of approaching the task systematically. For example, Mr. Miller emphasized that:

> To install such systems . . . it does require organizational commitment; it does require long-term organizational planning . . . [and it does require] analyzing the information needs of an organization and how current and potentially future technology can be applied to that. (65)

This opinion was supported by other witnesses, including Mr. Lawrence Seligman that "the first step is the hardest. That is defining what you need, and looking for a system and vendors that can meet those needs and grow with your needs in the future." (99)

A number of witnesses highlighted the importance of anticipating future system demands and providing the capacity to expand existing capabilities. Although warning against acquiring leading edge technology which had not been widely tested as a commercial product, Mr. Jack Davis favored a modular or incremental approach "so that you can build on the capabilities you already have". (44) In addition, Mr. Vico Henriques noted that "the key element of that is planning at the beginning to take advantage of what may be available five years down the road." (56) As Mr. Seligman stated, "future expansion is a really important capability. New office automation equipment and capabilities are being introduced at an increasingly faster pace" according to Mr. Seligman (98) and a system should be designed which can take advantage of these new offerings.

The problems of standardization, compatibility, and interconnection received the greatest attention from both Senators and industry representatives during the hearings. At issue were questions of how to reconcile individual user needs and diverse pieces of equipment with one system which could serve the entire Senate. When queried on this problem, witnesses cautioned against moving too far in either the direction of uniformity or individuality. They suggested that today's technology, when properly applied, could provide core capabilities to all users, while allowing for special needs to be met through customized services and add-on equipment.

All witnesses agreed with Mr. Kenneth Olsen, President of Digital Equipment Corporation, who advised that "there have to be certain standards well thought out ahead of time so that they [various equipment] can communicate freely." However, on the other hand, Mr. Olsen added that "standards all the way limit growth and development." (21) In other words, "there has to be the basic compatibility" (22) among terminal devices, but beyond that individual user needs and tastes can be satisfied through different types of equipment. As Mr. Davis emphasized, "without this kind of integration, we will be plagued with duplication of effort, competing data bases and fragmented inter-office communications." (32)

Witnesses commented that the full advantages of desk-top computers in office environments can only be realized if they are able to be integrated within the larger network of operations. Within a setting such as the Senate, actually a number of different layers of networks could operate, ranging from the individual office, to the Senate, to Capitol Hill, to other larger public networks. One type of system suggested by Mr. Stuart Miller involves a modular approach in which "the different components of the system can function either in stand-alone modes or in small network mode or in a large inter-office kind of mode." In this way, "it is possible to incrementally add components into the system, having established a principal basic network in the first place." (70)

What is critical is that the various elements involved be capable of tapping into the common network. As Mr. Davis stated, "the proliferation of individual elements without a well thought out integration strategy or network may be counterproductive." (41) Mr. Miller added that, "it does not require one supplier to provide a complete system. It does require that bridges and gateways be proved between different systems . . . ." (68)

One approach to solving this problem is the creation of a network capability which can integrate the varying components of a system. According to Mr. Salvatore J. Barbera, Chief Executive Office of American Bell:

> This approach to information management on an application by application basis has resulted in systems and networks that are frequently separate and incompatible. In addition, these systems are often inflexible, difficult to modify, and incapable of easy incremental growth, creating barriers to data exchange and effective information management.
>
> A network processing service should be designed to solve these and other business problems. It should be a shared, widely distributed, customer programmable network, and a logical extension of evolving data processing environments. (76)

Finally, when questioned on the establishment of standards in the data processing industry, witnesses indicated that some steps were being taken, but that much remained to be studied. While cautioning again against the negative impact that too many standards may have on innovation, Mr. Henriques stated that:

> It is fair to say that there are elementary standards which can be provided now both for hardware and software to achieve interconnection, and that as we go on, the industry will make its best effort cooperating with the users to develop the higher level standards to make it even easier and faster amd more secure. (54)

TRAINING/SERVICE/SECURITY

Inherent in the growth of computer terminals, data bases, and new system capabilities is need for users to be trained adequately. To a certain degree, the technology is itself providing the solution to the training problem. According to Mr. Lawrence Seligman, "you will see increasing friendliness of the equipment, both from the competitive standpoint and from the standpoint of the industry to produce that kind of product at a reasonable price." (105)

On the other hand, despite the improvements in ease of operating automated systems, a certain degree of training will be required. And, the larger the number of systems and types of equipment, the greater that need will be.

Mr. Kenneth Olsen noted that, "there are this list of disadvantages to having more than one vendor, and you have to weigh that." (23) Included in this list is the training factor.

Furthermore, the problems of system reliability and customer service also depend upon the products involved and the particular vendors which offer a service. Mr. Jonathan Weinberg noted that his firm has built a sizable business on the premise that "all our products are designed for the non-technical user." He stated that "the key to making these products usable is the software that drives it as well as the service that the companies that are providing these products and services are able to supply." (114)

Ultimately, as Mr. Olsen summarized, "when the Senate becomes dependent on a computer system, service and reliability are of the utmost importance, and that's a business decision that has to be worked out." (23) One way to approach the problems of training and service is through an in-house group of technical experts. Particularly in a setting such as the Senate where most users have limited technical backgrounds, the need for qualified staff to evaluate equipment and interact with vendors is important. This need is accentuated according to Mr. Vico Henriques by the fact that:

> . . . as the cost of products diminish, the relative cost of support, maintenance and service increases. More and more the end user will assume responsibility for serving and supporting his own system and not rely on the vendor personnel as the program support service. (50)

As a result, several witnesses concurred with Mr. Henriques that a "centralized support facility . . . which would be able to assist and to guide the individual members' offices in their acquisition and continued support of such systems" (52) would be highly desirable.

Another critical consideration in the design of an automated office information system is the possible need for security. Here again different levels of action may be required depending upon the application involved and the sensitivity of the material in the system. However, confidentiality of certain office files may be required. Therefore, Mr. Kenneth Olsen advised that "security costs money; security has complexity and red tape . . . and it shouldn't be used when you don't need it, but it should be considered as part of the system." (28)

COSTS AND BENEFITS

An important consideration in evaluating an automated information system is the cost involved and the benefits accrued. Repeatedly industry representatives cautioned against attempting to evaluate the worth of computer and communications systems based upon traditional measurements. In some instances, such as printing, cost savings can be achieved through employing modern technology. However, the true worth of information technology is reflected more accurately in the ability to do one's job easier, faster, and better. According to Mr. Olsen:

> We do not argue for cost saving; it can be there, it may be there. The main argument for use of electronics in the office is it makes better use of the time of those people that you can't duplicate or have more of. And so the argument is: to make things easy. (16)

In addition to improving the ease of work in the office environment, information systems provide the opportunity for enhanced decisionmaking. Particularly as issues become increasingly complex and technical in nature, policymakers require ready access to reliable information on a wide range of subjects. As Mr. Stuart Miller succinctly noted, "frankly it is the quality of decisionmaking that I find more than adequately justifies the installation of the system." (72)

It is not merely access to new information which improves the decision-making process, but also the availability of data in different formats. For example, today's computer systems provide sophisticated graphic representations of information which is often difficult to analyze in tabular form. The advantage according to Mr. Seligman is that "often one can look at graphics and trends much more clearly by looking at a chart than by simply attempting to scan a pile of numbers." (92-93)

Ultimately then, these automated systems allow individuals to perform on the job in ways in which they were unable to do before. As Mr. Seligman further observed, "there is a fairly significant change in our ability to handle information in an increasingly complex world and our ability to view that information in ways that we have not been able to view it before." And because of that "we are doing things now that we could not have done before, rather than strictly saving money." (89)